ATHLETIC JOURNAL

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Handling the Ball and [illegible] Field Running

Clark D. Shaughnessy

Center Jump Formations [illegible] the 1936-37 Basketball [illegible] Code

Clifford Wells

Coaching the Kicker

James D. Kelly

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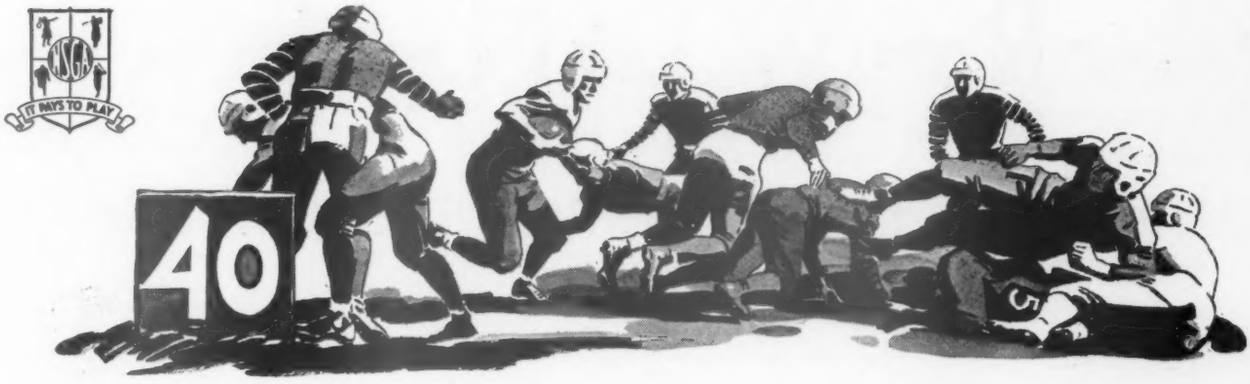


The Coaching Mistake

that almost cost a Championship

by a famous High School Coach

as told to William D. Thornton, Coach, South Side High School, Newark, N. J.

"THE OTHER DAY, during a football "fanning bee," I heard a well-known high school coach relate this remarkable story:

'If I live to be 100 (he said) I'll never forget the season I almost lost a championship—with the best team I ever coached!

'One look at that squad told me I had a good team—perhaps a great one. The boys had everything — speed, brains — the right balance of new men and veterans. It looked as though I had an all-State winner.

'The boys clicked, too. We breezed through the early-season games without even being scored on. Practice was a pleasure, and I felt like a million dollars.

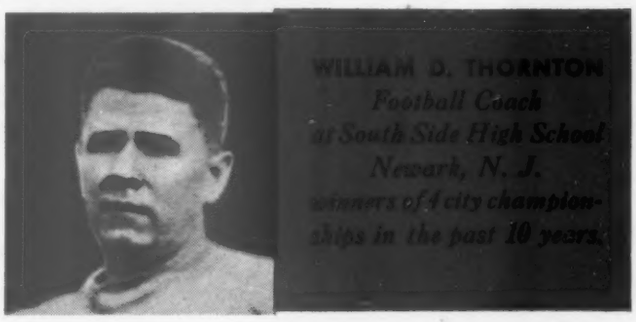
'Then something started going haywire. Timing was off—morale went bad—teamwork seemed to break up right under my nose. I thought the boys had gone stale, and gave them a week's light signal drill. But nothing helped. And the big game was only a few days away, and all I had to win it with was a team that had lost the winning spark.

'Well, after the final practice I wandered into the locker room. I was just coming through the door when someone's supporter just missed my head, and slapped against the wall. I ducked; but the boys hadn't seen me, and the one who had thrown the supporter had tossed it over his shoulder. "That darned thing!" he said bitterly. "Every time I trot out on that field I have to tie a new knot in it. Why don't they get us some decent 'jocks'?"

'The first-string quarter chimed in. "I don't know what's the matter with the school," he said. "Last year we had swell outfits. This year, they've got cheap equipment, or something. They keep my supporter clean, but it's stretched so that it hasn't done me any good since. I have to pull it up after every play."

'Those lads had told me enough. I turned and went out without being seen.

'Well, that's the story. I made a bee-line for the nearest sporting goods store and got a few dozen brand-new Bikes. . . . Did we win that game? Sure . . . and the all-State championship, too. That was a sweet team. I never got over being surprised that a little thing like worn-out supporters could make such a difference in morale—the difference, in fact, between a championship lost and a championship won.' "


WILLIAM D. THORNTON
Football Coach
at South Side High School
Newark, N. J.
winners of 4 city championships in the past 10 years

* * * *

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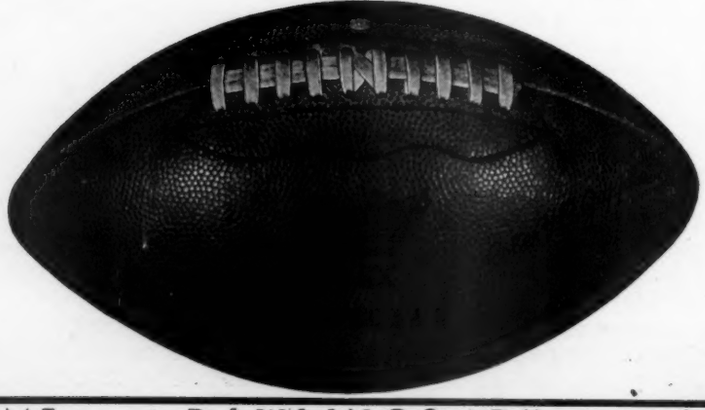

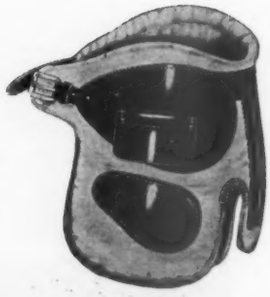

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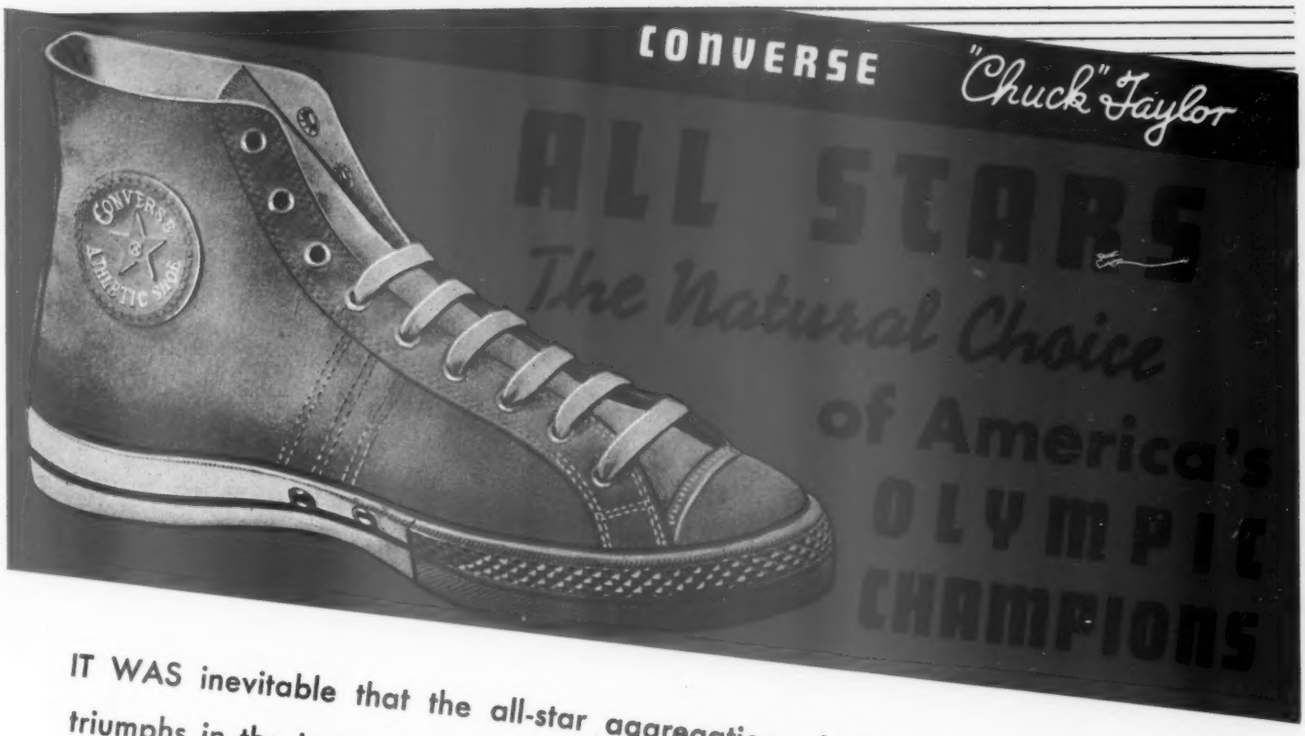

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VOLUME XVII

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NUMBER 1

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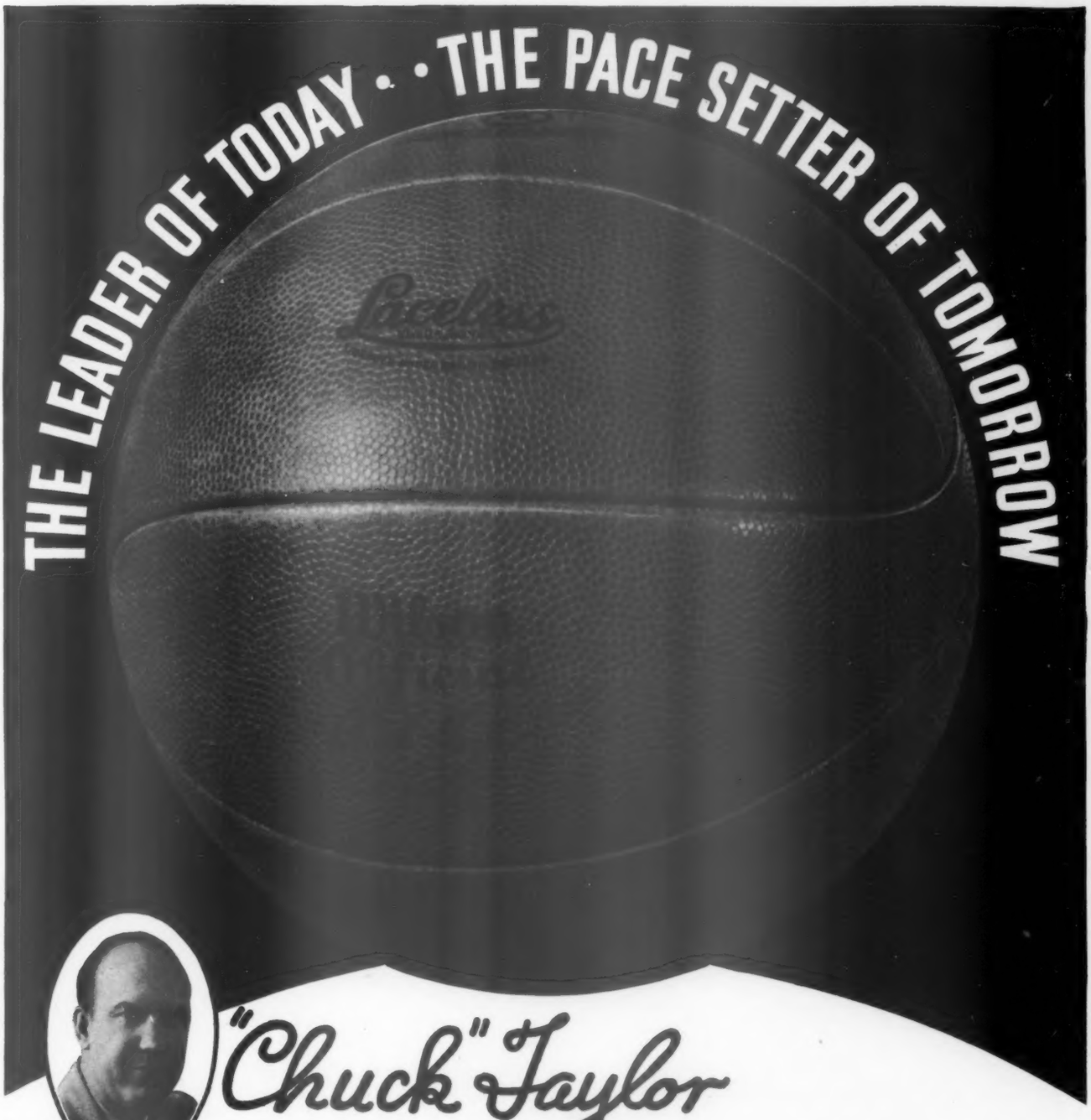
THE LEADER OF TODAY . . THE PACE SETTER OF TOMORROW



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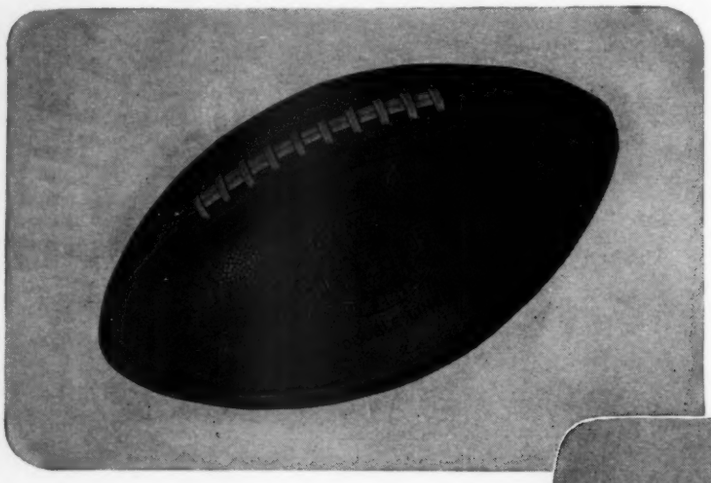

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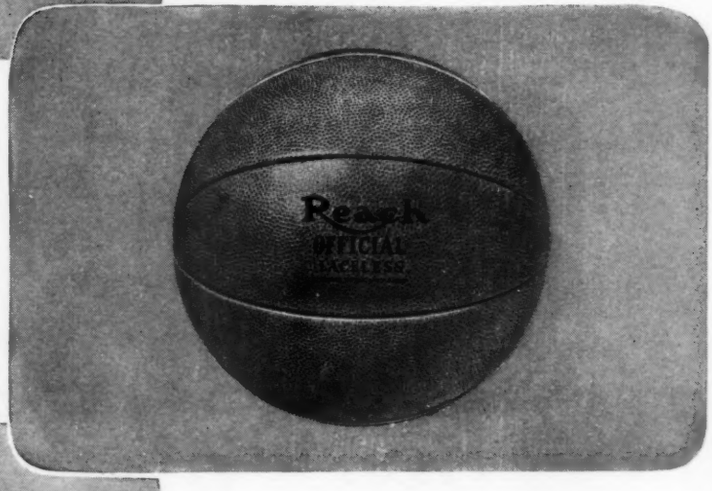

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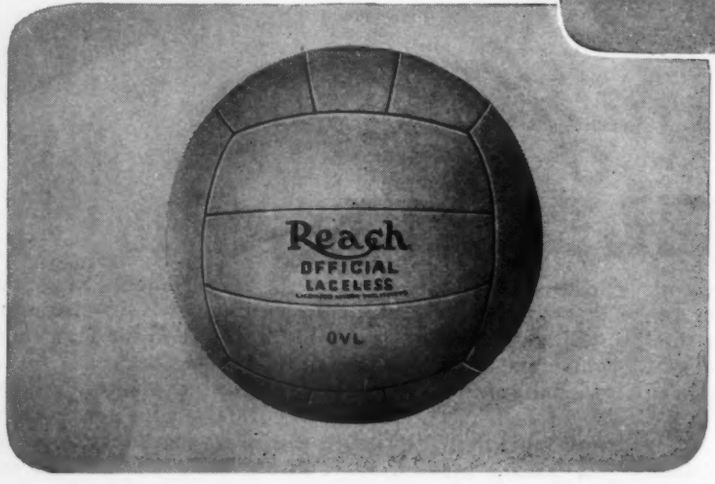

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ATHLETIC IT PAYS TO PLAY EQUIPMENT

Scrimmage between two teams of College All-Stars at Evanston, Illinois, August, 1936. Jay Berwanger, former University of Chicago back, is carrying the ball. William Shakespeare, formerly of the University of Notre Dame, is the dark-jerseyed blocking back in the foreground.

Handling the Ball and Open Field Running

By Clark D. Shaughnessy
University of Chicago

CARRYING out the assignments which modern football demands that backfield men must be able to handle involves a great amount of varying sorts of skills.

Receiving the ball from the center may seem relatively an easy thing to do, but even here proper technique will prevent fumbles and speed up the execution of the play that is to follow, whether it is to be a run, a buck, a pass, a punt or a quick kick by the man getting the ball from the center. Where the play calls for this man to hand the ball to another player, proper technique is even more important because, if the first man is awkward or slow in his ball handling, the play that is to follow must necessarily lose a lot of its effectiveness.

Receiving the Ball from Center

Generally, it might be said, the most common fault of backfield men is their tendency to "fight" the ball. It seems to be natural for them to grab at the ball and to have the hands and wrists taut. Such faults, however, will cause fumbles, because, unless the player is fortunate enough to catch the ball just exactly right, he will have difficulty in holding it. The ball will hit one of his stiff fingers, or the heel of his hand, or somewhere else, and rebound from the impact. What he should do is to "give" with the ball; that is, his forearms, wrists, hands and fingers must be relaxed, and when the ball reaches the player, instead of meeting it with firm hands and wrists and stiff fingers, he should reach out toward it a little, and then pull his limp forearms and hands backward somewhat, just as the ball reaches him, allowing it to settle in his hands.

Besides relaxing his arms, wrists and hands in this way, the player should see that his fingers do not point toward the ball. Rather, they should be extended downward or to the side. In this way, only the palms of the hands and the insides of the fingers can come in contact with the ball. Many broken fingers and dislocated knuckles result from having the fingers extended stiffly toward the ball.

If a player is receiving the ball from the center, preparatory to fading back and forward passing, he can help himself by the little mechanical trick of having his right hand (if he is a right-handed player) extended beyond the left in such a way that when he receives the pass from the snapper-back, which must be a spiral, his right hand will be below the end of the ball away from him, and his left hand at the end of the ball toward him. Then, as he raises the ball with his hands without changing these positions, preliminary to throwing it, he can rotate the ball with his left hand until his right hand feels it has found the proper grip, his right being already on the propelling end of the ball. This method will dispense with the "juggling" of the ball that so many passers do in order to get it properly placed in their hands for a throw.

If a player is going to take a direct pass from center on a buck into the line, especially if he starts with the ball, it is often desirable that he make a "basket" in which to receive it. Some players have a lot of trouble when plunging straight ahead from a low stance and trying to catch the ball, their hands "giving" with the ball. If these men would practice placing the backs of their hands, the fingers extended and pointed downwards, tight against the inside of their thighs a little below the crotch, and allowing the ball to drop into the "basket" formed by the

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AT the University of Minnesota, Clark D. Shaughnessy played end, tackle and fullback on Dr. Harry Williams' famous football teams of 1911, 1912 and 1913. From 1915 through 1926, he coached football at Tulane University. Then followed six years as Director of Athletics and Head Football Coach at Loyola University of New Orleans. Since 1933 he has been Head Football Coach at the University of Chicago.

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stomach, the forearms and hands placed in this way, they would have little trouble with fumbles. This way of receiving the ball for a plunge into the line from a low stance is particularly effective when the ball is wet. It is almost needless to say that, when the man first receiving the ball from the center must hand it to another player, he must receive it in his hands, as here the time element is so essential that he would not have time to take the ball out of the "basket" and then hand it to a team mate.

Starting the Run

There are varying opinions on just how a halfback should start on a run around end or outside tackle. Some coaches believe he should take the ball from a "dead" start; that is, receive the ball first and then start. Others believe he should be given a "lead" and pick the ball up on the run. Whether one way or the other is correct depends upon the purpose of the play and its relation to the other plays in the offense.

If the ball-carrier takes the ball on a "dead" start, it probably would follow that he should start with a cross-over step, as it would be more natural and perhaps a little faster than stepping out with the foot that is toward the direction in which the play is going. On the other hand, if he is going to pick the ball up on the fly, it is best that he step out with the foot that is on the side toward which the play is going. It is hard for the ball-carrier to reach for a ball when he starts with a cross-over step, and therefore fumbles are more likely than when the other start is used.

When the play calls for a substantial lead to be given the ball-carrier, the precision required to have the ball exactly at the right spot at the right instant is more than an average center and ball-carrier can get together on. With the "step-out" start, this lack of precision can be corrected by the runner reaching for the ball.

Cutting Back

There are also varying opinions on how a runner should handle his feet when he wants to cut back, inside or outside of tackle, or even back through the line. Some coaches insist on their ball-carriers using a cross-over step here also. Others insist on what might be called a "jack-rabbit" turn; that is, a turn in which the player puts the outside foot down and turns on that. The probability is that the method to use should depend largely upon the individual player. It is a little more deceptive to use the cross-over turn, but there are not many men who can do much of a job with this turn. Generally, players with relatively short legs can do a better job with the "jack-rabbit" turn, and those with long legs are more likely able to make better use of the cross-over step, but many of the long-legged ball-carriers can never learn the cross-over step. From a coaching standpoint, it is best to develop the style that is more natural to the player.

A habit that is hard to "coach" out of players is their tendency, almost determination, to start looking at the spot they are aiming for, almost from the instant they receive the ball from center. This, of course, is a tip-off to the defense that will defeat the play. Ball-carriers must be drilled to point their faces just as if they were going to race around end and never turn their faces toward the point they are going to attack until they make the turn. Particularly skillful players may be able to turn their faces out and only their eyes toward the spot of attack, but not the ordinary player.

Broken Field Running

Broken field running is undoubtedly the most spectacular feature of football. It overshadows everything else in the game. There is something about a chase that appeals to the human imagination, and, when a human being is the quarry, it is doubly exciting. The public remembers the great ball-carriers and their ball-carrying ability. Few people ever think of the other great abilities or lack of abilities of their gridiron aces. The coaches probably do, but not the fans. We coaches wish there could be the same thrill to great tackling, blocking, plunging and the rest of the fundamentally necessary arts of football, but as long as human nature remains the way it is, it is the hare and hound aspect of football that thrills the crowds, and their sympathy is with the hare. Long runs are to football just what home runs are to baseball. The public goes to a game hoping to see just one of these runs in football, and it is satisfied with just one home run in any baseball game.

How the super-heroes become what they are is another story. Leaving out the parts the team mates play, no matter how vital they are, these superlative performances are always the products of two things—natural ability and hard work. They must go hand in hand, and, unfortunately, many a potentially super-great, to whom a great amount of attention comes without much effort, is too easily satisfied, lets down in his efforts and thus fails to reach the heights his natural ability warrants.

Even though the player has a great amount of natural ability, there are always some things he must practice. Likewise there are players who have only a little natural ability, but who, for want of anyone else, a coach must use for his broken field ball-carrying.

The Straight-Arm

Getting by a tackler is accomplished in several ways. One of the most successful and also the most neglected way is by the use of the straight-arm. This method is particularly adaptable to the rugged runner who is not particularly elusive. Also, this is an art that may be learned through practice by any player. Involved with straight-arming is the ability of the runner to change the ball from one arm to the other while on the run.

Most of the time the straight-armer's target is the head of the tackler. If he can deflect the tackler's head, he can usually avoid being tackled. Often a runner makes the mistake of extending his arm before reaching the tackler. In this way he gives the tackler something to grab when he cannot reach the runner's legs. A straight-arm should be made with the heel of the hand and not with the fist. The runner must maneuver himself to one side of the tackler. A tackler coming head on cannot be straight-armed by a runner going in the opposite direction. The tackler's momentum would carry right through the straight-arm.

A runner intending to use the straight-arm must turn and angle off to one side, place the ball in the arm opposite the tackler and then strike out just as the tackler makes his lunge; not before and, of course, not after.

In addition to striking out, the runner must be sure to get the leg nearer the tackler out of the way simultaneously. This may be done by a long step to one side away from the tackler, with a simultaneous fading with the leg nearer the tackler until the tackler's deflected lunge has carried him beyond the runner, when the runner may then bring his near leg forward again for the next step.

Illustration 1—This and the other pictures in this series are of Jay Berwanger, former University of Chicago back, in a scrimmage between two teams of college All-Stars at Evanston, Illinois, in late August of this year. Berwanger is starting his run on the right foot, which is the correct form when running to the right. His forearms and hands are relaxed. He is preparing to take a lateral pass from the back who is directly behind the line.

Illustration 2—As the ball is being given to the runner with an extra long lead, it is necessary for him to take three steps to reach the ball. He is shown here about to take his second step.

Illustration 3—The runner is catching the ball as his right foot strikes the ground on the third step. He is in a position approximately the same as that in which he would have been if he had caught the ball on his first step.

Illustration 4—The runner sees an opportunity to cut back immediately instead of feinting to the outside, which he would do on an ordinary end run.

Illustration 5—Here the runner is in the middle of the cross-over step. He has planted his left foot and is picking up his right.

Illustration 6—The runner has finished the first crossover step. His right foot is on the ground and he is picking up his left foot, preparatory to making another cross-over step.

Illustration 7—The runner is planting his left foot and starting the second cross-over step, preparing to cut still farther to the left.

Illustration 8—The second cross-over step has been completed, and the runner is on his way.

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Another way is for the runner to leave the ball in the arm nearer the tackler and, so to speak, give the tackler that much more inducement to grab at that side of the ball-carrier. Then, just as the tackler makes his lunge, the runner plants his far foot, straight-arms with the far hand and pivots right about face out of the tackler's grasp, using the impact of the blow upon the tackler's head to help swing himself around. In this way, he swings the near leg backwards, right away from the tackler's grasp.

Cross-Step and Pivot

Sometimes, when a tackler is coming head on, a runner can cross-step out of his way without difficulty, lashing out with the hand that is on the same side as the leg he cross-steps with for a double insurance against the tackler's grabbing his jersey or pants with his hands. This requires practically perfect timing, because, if the cross-step is a little late, the impact of the tackler will carry through the straight-arm and into the runner before he can get his leg all the way over for the next step. Likewise, if the cross-step is too soon, the tackler can change his direction and make an angle tackle.

Pivoting by line plungers is a very good way to make additional yardage and is an art that can be learned. The runner feels himself being grabbed from one side or the other. Usually, on the line of scrimmage or just beyond it, the tackle has no particular momentum with which to knock the runner off his feet. The runner can usually pivot on the foot that is away from the tackler and, unless the tackler has his arms well around the runner, the force of this pivot when executed by a heavy plunger is sufficient to break the tackler's grasp, leaving the runner facing forward and ready to start driving again directly or obliquely forward.

Change of pace is a medium some runners use almost to the exclusion of any other weapon. Again, this requires a practically perfect sense of timing, in this instance, not only of the runner's own speed but the speed of the approaching tackler. To head off the runner, the tackler must gauge his angle, based upon what he thinks is the rate of speed of the runner. Then, if the runner has a little speed in reserve, just a second before they meet the runner may put on an extra spurt and leave the tackler behind him.

For practice in side-stepping, automobile casings may be used and the men required to hop from one to another. These casings may be placed in various arrangements and varying distances apart, depending upon what the coach is trying to accomplish.

Interschool Sports in the Educational Program

By W. H. Browne
University of Nebraska

SINCE the World War, sports and athletics of all kinds have rapidly assumed a place of major importance in the life of the American people. History tells us there is a marked renewal of interest in sports of various natures following all major wars. This was greatly in evidence following the Civil War, and, since the same phenomenon has been much in evidence since the World War, it is reasonable to assume that there is some correlation between military training, together with the mobilization of citizens for military purposes, and athletics.

Anyone who has read athletic literature the last few years must have been impressed by the frequent attempts of different writers to defend or condemn certain athletic conditions and practices by citing a striking illustration of malpractice, poor judgment or ignorance, or by calling attention to the evident value of athletics as exemplified in the life, or acts, of some individuals. Thus, it is said of Bobby Jones that as a boy he did not control his temper when things went wrong with his golf game, but that later his manner and self-control were the finest to be expected of a gentleman and sportsman, and a worthy example to young Americans. Some people suggest this points conclusively to the character training values of golf. A newspaper not long ago published the account of a golf player who, after driving three balls into the lake, in great disgust threw in clubs and bag. Then, when his caddy snickered at his acts, he threw the caddy in also. This could be cited as proving the falsity of any contentions of character training in golf. Individuals' acts could be cited from all sports, or most other activities, proving or disproving the contention that there is, or is not, character value in those sports or activities.

The Purpose of Education

Since educators as a class have not yet agreed regarding the function of education, we could hardly expect the aims and objectives of athletics to be unanimously agreed upon. Many diverse opinions relative to the place athletics should occupy in the field of education are advanced by educators in different sections of the country. However, not many of them would eliminate all athletics from education. A study of the early literature on education in this country shows that college professors in the early '90's did not believe athletics belonged in the educational scheme. The report of the Committee of Ten, appointed by the National Education Association, published in the late '90's makes no mention of athletics, gymnastics or physical training. The educators in our universities and schools in those days frowned upon all forms of athletics in their institutions. Yet athletics have persisted and are today a virile activity for thousands of students.

A train of thought existing in the recent literature of school and college athletics is the acceptance of athletics as education. The athletic program was at first opposed, later tolerated as a necessary evil, and then recognized as an integral part of the educational program, until, as Professor Inglis wrote in his book, *Principles of Secondary Education*, "There is evidence that the stone the builders rejected may become the head of the corner."

In one of the famous Carnegie Foundation reports, Dr. Pritchett calls to our attention the fact that the American university was transplanted from Europe with its primary aim the development of the intellectual life. The educator who is not in accord with the modern idea, that the colleges and schools should serve not only as an intellectual agency but as a socializing agency as well, whatever his ideas

AFTER graduating from Morton High School, Richmond, Indiana, William H. Browne attended Earlham College, Wisconsin State Teachers College at LaCrosse and the Normal College of the American Gymnasium Union at Indianapolis, Indiana, graduating from the last named institution. He did graduate work at the University of Nebraska where he received the degrees of Bachelor of Science and Master of Arts. After having coached at Auburn, Indiana, High School and Froebel Public School of Gary, Indiana, he was named Head of the Department of Physical Education and Head Coach at Lincoln, Nebraska, High School. During his ten years at Lincoln, he turned out a number of championship basketball and football teams. The football teams lost only three games in ten years. Three of the ten basketball teams were state champions. In 1930 he joined the coaching staff of the University of Nebraska and in 1932 he was named Head Basketball Coach of this institution.

of the value of athletics, may sincerely believe that it is not the function of the schools to sponsor the athletic program.

The changing conditions under which we live have made it necessary for a changing purpose in our education, and hence a changing purpose which our schools are to serve. I believe the purpose of education should be stated in terms of living. It is not enough for the student to acquire a store of learning. He should prepare for broad interests, wholesome recreation and socialized living after school days by experiencing these factors during school days. This means that the schools should broaden their program and do what they can to preserve and develop bodily health; to cultivate and establish healthful habits; to elevate, strengthen and establish ideals of personal conduct; to try to temper the will and to co-ordinate and discipline the whole individual; and to make provision for wise relaxation and wholesome recreation and play.

The development of the intellectual life alone is not a sufficient objective for our schools today. The schools should do what they can to offer to their students every inducement and facility for the development of those capacities and habits of mind and body and will which are designed to aid the individual to take a respected place in his community and enjoy life to the fullest of his ability. Fundamentally, then, the purpose of all education is to build men.

The Building of Men

With this conception of the purpose of education, we find it becomes the greatest business in the world. If we are successful in building the right kind of men there will be no social problems, no economic problems, no political problems.

To build men we must work with boys. The boy today is the man tomorrow, and the man is not going to be very different from the boy. The job of building a man must be begun very early and it must be practically completed when the boy reaches the age of twenty-one.

The job of making men can best be achieved by developing simultaneously the fundamental parts of man's being. The head, the heart and the hand—they all need training to the end that the boy may have a keen intellect, a sound character and an active, healthy and enduring body. Furthermore, if the boy is to grow into a

(Continued on page 53)

Coaching the Kicker

By James D. Kelly
De Paul University

NOW in his tenth year as Athletic Director of De Paul University, James D. Kelly actively coaches football and basketball at the Chicago institution. He played end and halfback at the University of South Dakota, from which he graduated in 1919, after having played for two years during the World War on service teams. His first coaching experience was at Fonda, Iowa, High School. After two years at Fonda, he coached for four years at Buena Vista College. In 1926, he became Athletic Director at De Paul. Both his football and basketball teams have made impressive records. On the next two pages are shown De Paul University punters in action.

KICKING plays a very important part in our game of American football. There are three principal types of kick: the punt, the drop-kick and the placement kick.

The teaching of the punt is the most important. We have many more occasions for the use of the punt than either the drop or placement kick. There are two common forms of the punt in general use, the rolling, or end over end, punt and the spiral punt.

The average high school or small college coach does not have the time or the ability to coach the kickers in the minute details of kicking. A great many coaches have never had kicking experience. However, all coaches should acquire enough knowledge of the kicking game to cover the fundamental points.

Stance and Balance

First is the proper stance for the kicker. The average boy is inclined to take too many steps, and I find that most right-footed kickers will do their best by standing with their right foot slightly ahead of the left and, on receiving the ball, taking a very short stride forward with the right foot and then a full stride, landing on the left foot and following through, with the right foot kicking the ball.

When the kicker has acquired the proper stance, the next important factor is balance. Kicking is done while the player is on one leg, and, as this is an unusual position for a boy, he must acquire as nearly perfect balance as possible. This will come only after considerable following-through work without the ball.

Handling the Ball

Then comes the proper method of receiving the ball from center, and the holding and dropping of the ball. A right-footed kicker usually receives the ball with the right hand in the rear of the ball and the left hand near the front axis, the lace of the ball held up. Probably one of the hardest things to instill into the young kickers is the watching of the ball until it is actually kicked. Watching the ball is just as important in punting as it is in driving a golf ball or hitting a baseball.

Placing of the punts comes only with finished kicking. Any punter who can consistently place a ball away from the safety man or out of bounds is the most valuable asset a team can have and is worth a considerable amount of the coach's practice time to develop. All kickers must learn to use the wind. When it is behind them, they should kick a higher ball, and a lower driving punt when it is against them.

The Quick-Kick

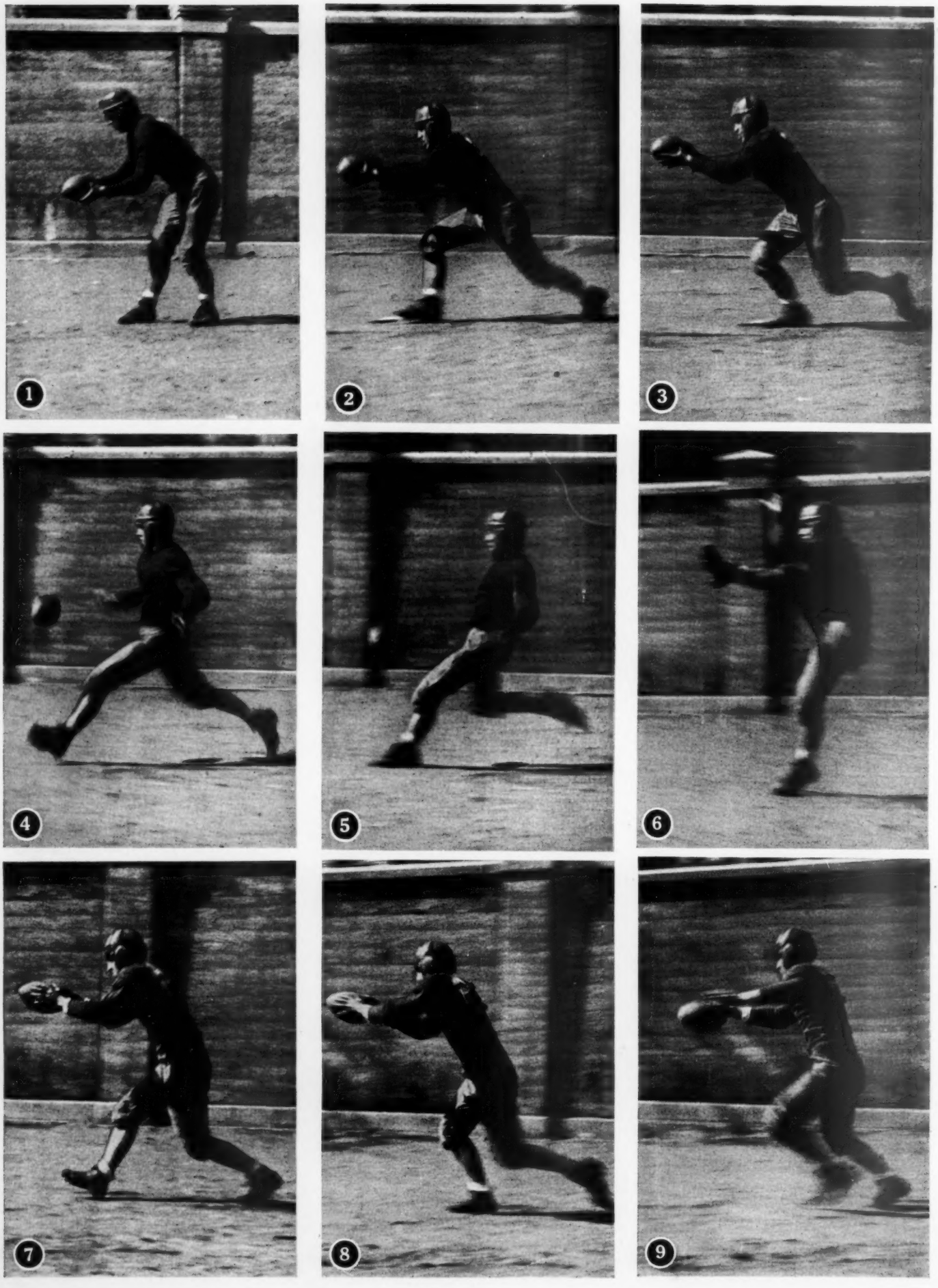
The quick-kick has become a very definite part of our offense in the last few years. "Quick kick" is an expression used for a punt that is made from a formation usually other than the regular kick formation and from a point close to the scrimmage line. The advantage of this type of kick is that it is usually employed when the safety man and secondary defense have been drawn in to stop running plays and short passes.

If properly employed, there is no more danger of this kick being blocked than a kick from the regular formation, as it is a surprise maneuver. It is important that a quick-kick be properly placed so as to go out of bounds near the opponent's goal line; otherwise it will usually roll over for a touchback, and the advantage is lost.

Practice

Pre-game kicking practice is very important for both the kicker and the safety man. They not only get used to the crowds but also to the varying wind conditions in the different stadia, and the safety man shakes off whatever pre-game nervousness he may have acquired. The punter should try several kicks from each end of the field, and the man who is designated to kick off should kick from both ends. The place kickers should kick both goals, with the boy who holds the ball on place kicks also getting some practice.

It is very important that young boys who are interested in kicking should be well grounded in the fundamentals. Any coach who is in the same position I have been in, never having been a kicker while competing, can benefit his kickers and himself greatly if he can get some one who is a good demonstrator to help him with his kickers' spring practice. It is almost impossible to do much in the fall with changing the style or going into the finer points of kicking with the squad.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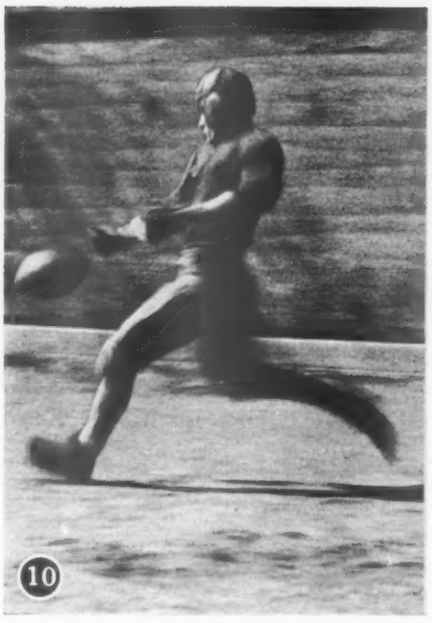


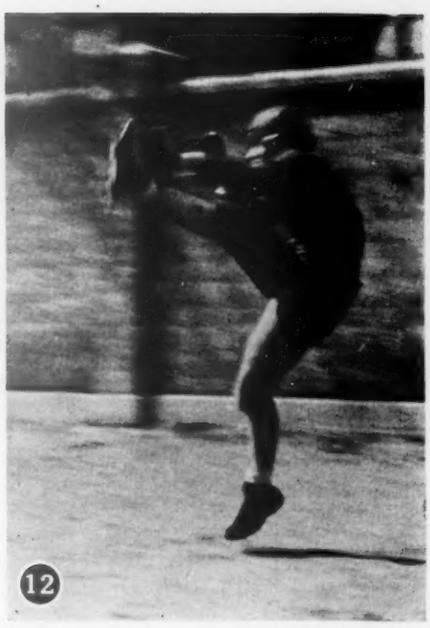


Illustration 1—The kicker has received the ball from the center. His right foot is advanced slightly and he has assumed a position that is steady and comfortable for him. He has his eyes on the ball.

Illustration 2—In this picture, the kicker is striding forward with his right foot. His eyes are still on the ball.

Illustration 3—The kicker has completed the first step and is beginning the second.

Illustration 4—The ball has been allowed to drop and the kicker is striding forward.

Illustration 5—The left foot of the kicker is being planted on the ground and the right foot is coming through fast. In this illustration the ball seems lower than it actually is.

Illustration 6—The player's right foot has met the ball and his leg is at the high point in the follow-through.

Illustration 7—The player in this and the following five illustrations is smaller than the one in the first six and for that reason his technique varies slightly. In this picture he is striding forward with his right foot after having received the ball from center.

Illustration 8—The right foot of the player has been planted and he is bringing his left foot forward.

Illustration 9—Here the ball is just leaving the player's hands, and his left foot is coming forward fast in the stride.

Illustration 10—The left foot is being planted, and the right foot is coming through fast.

Illustration 11—With his left foot firmly planted on the ground, the player has just met the ball with his right foot.

Illustration 12—This shows the high point of the follow-through. The player is off the ground. He is smaller and, therefore, has used more drive than the player shown in the first six illustrations.

Changes in the 1936 Football Rules

Walter R. Okeson
Lehigh University

IT may be of aid to the students of the 1936 Rules if they are apprised of the reasons for such changes and revisions as appear in this year's rules. In most cases the changes are minor in character and were made merely to cover certain possible cases which were provoking discussion but which were really not causing much trouble. By knowing the reason for these changes the student of the rules will be able to save time and also be prevented from reading into the change something which was not intended.

1. PAGE 4, R2—A diagram showing the longitudinal section of a standard ball is shown in order to secure uniformity in manufacture.

2. PAGE 5, R3, S4—A supplemental note is added, giving players permission to use their hands or arms on the back of opponents when legally trying to recover a free ball. The Committee did not wish this perfectly legitimate action to be construed as clipping.

3. PAGE 9, R3, S21—The Approved Ruling is omitted and a new paragraph added to the Supplemental Note. The A. R. covered only the case of a player catching a forward pass while his person is touching one of the goal posts. The S. N. broadens this by covering any ball touched or recovered by a player whose person is in contact with a goal post but whose feet are in the end zone. The reason for this change was to have uniformity.

4. PAGE 10, R3, S26—The words "kicked forward" are omitted in the definition of a Return Kick. This was done to cover all cases where the ball is kicked by the team which did not put it in play, as for instance if a forward pass is intercepted and the team B player kicks the ball.

AS commissioner of the Eastern Collegiate Association, Walter R. Okeson is a thorough student of the football rules. While, as he says, the interpretations presented here are not official, they are nevertheless generally accepted.

5. PAGE 13, R4, S1, A1, I3—The Penalty for arriving late on the field either at the beginning of the game or at the beginning of the second half is made 15 yards instead of 25 yards. This is for the sake of uniformity in yardage penalties. The ball is no longer put in play by a scrimmage after this penalty but by a kick-off. This is also done for uniformity. Notification by the officials 3 minutes before the beginning of the second half is no longer required. The difficulty of finding the teams and of getting into the dressing rooms after they are found led to this change.

6. PAGE 17, R4, S3, A6—In the last line of the Approved Ruling the words "Team B" are changed to "the team on defense." This was done to cover the case where the ball changes hands on the last play of a quarter and the run-back is interfered with by a foul by the team which put the ball in play. The penalty would be enforced and the team in possession of the ball would have the right to a play in that quarter.

7. PAGE 18, R5, S2—The penalty for

illegal return is changed from 25 yards to 15 yards. This, with the change in Rule 4, eliminates all 25-yard penalties. It was done, of course, for uniformity.

8. PAGE 19, R5, S2—A new Special Note suggests that competing colleges authorize their coaches to assume all responsibility for the legality of substitutions. This is done in certain parts of the country and relieves the umpire of a lot of bookkeeping. The substitute reports to the umpire as usual, but the umpire does not have to check to see if such substitute has been in the game during that quarter.

9. PAGE 20, R5, S3—A new Special Note is added recommending that minimum 6-inch numbers on the front and minimum 8-inch numbers on the back of jerseys be worn by all players. This is for the benefit of spectators and newspaper men.

10. PAGE 21, R6, S2, A1—The Supplemental Note and Approved Ruling are omitted, a new sentence added to the second paragraph of Article 1 and a new Supplemental Note added. In a word, instead of penalties being non-cumulative on the kick-off, they are now cumulative. This was done to prevent a team which has been assessed a severe yardage penalty from kicking out of bounds in order to cancel this penalty.

11. PAGE 28, R7, S5, A1—In the 1935 Rules the last sentence of each of these penalties read "The penalty may be declined if the pass is intercepted." This year the additional words "or if it is incompleted on or behind the passer's goal line" are added. (In the case of Penalty (1) the addition was really not needed but was inserted for the sake of uniformity.) There was some argument during the 1935 season that if a safety was scored on an illegal forward pass the above penalties contradicted R9, S4, because they could only be declined if the pass was intercepted. The Rules Committee considers that R9, S4 governs but to save argument inserted the above words in the penalties. The situation is unlikely to occur, but if it does it scores a safety against the offending team.

12. PAGE 29, R7, S5, A1—The Supplemental Note has a new final paragraph making the ball dead on any illegal forward pass made from behind the scrimmage line as soon as it strikes the ground or is caught by a player of the passing team. This with the first paragraph of the Supplemental Note will obviate useless running with the ball and consequent tackling. This note should save unnecessary injuries and speed up the game.

13. PAGE 32, R7, S5, A4—The second paragraph has been rewritten making it interference if an ineligible player who has crossed the line of scrimmage (on a forward pass which has crossed the scrimmage line) is in advance of the spot where the pass becomes completed, incompleted or intercepted. This was done to discourage the use of ineligible men as decoys without going to the length of prohibiting them from crossing the scrimmage line.

14. PAGE 32, R7, S5, A4—The second Approved Ruling of the 1935 Rules is deleted. The rule is clear that ineligible players who have crossed the line of scrimmage may not obstruct the right of way or view of opponents; so this Approved Ruling seemed unnecessary.

15. PAGE 34, R7, S6, A2—This has been rewritten to give the kicking team the right to recover and *advance* the ball on any kick which does not cross the line of scrimmage. This seemed only fair but officials should note it makes an exception to the uniformity which previously existed on kicks. That is, it is no longer true that members of "the kicking team, if they recover the ball, may never advance it."

16. PAGES 34 AND 35, R7, S7—In (c) the following words are added "or when an illegal forward pass is caught by the passing team." In (h) these words are added—"or when a signal for a fair catch is made and the ball is caught by another player." This was done to complete the list of cases where "the ball is dead and shall be so declared by the Referee."

In (f) it would have been well to have added the words "except as noted in R7, S6, A2," for as noted above the ball is *not* dead in this case.

The Supplemental Note under Article 1 has been deleted. This was done because the general sentiment was that this note conflicted with the statement that the ball is dead when the runner is so held that his forward progress is stopped.

Under Article 2 the "Ruling" under the Approved Ruling is changed to read "not a touchdown unless the forward point of the ball is on, above or across the goal line at the moment the runner strikes the ground." This is not a change but merely a clarification.

Walter R. Okeson

17. PAGE 41, R9, S3, A2—A new S. N. has been added reading: "If a foul occurs during a 'try' while the ball is in the air from a kick, the ball shall be considered as still in possession of the kicking team." This was done because some officials were calling fouls which they declared took place in the split second which elapses between the time the ball leaves the kicker's foot and the time it scores a goal. In order to secure uniformity of ruling by all officials, the Committee added the above note.

18. PAGE 43, R9, S4, A2—At the end of the first paragraph a sentence was added reading: "The safety may be declined if declared as the result of a foul." This was merely to bring the rules in line with the 1935 interpretation.

19. PAGE 48, R10, S1, A4—The S. N. note under this Article was changed to read: "If a free ball is kicked, unless a penalty is called and accepted, it is to be treated simply as though the ball had been touched." This puts all accidental kicks in the same category as a ball touched by hands, arms, or any other part of the body and eliminates several tricky situations which could arise under the old note.

20. PAGE 49, R10, S2, A2—A new S. N. has been added reading: "This rule is to protect the kicker from injury. If contact is slight, or is caused by the kicker's own motion, this shall not be interpreted as 'running into the kicker.'" This was added so that the Referee could use his discretion and not be obliged to give a penalty every time there is the slightest contact.

21. PAGE 51, R10, S2, A9—Instead of a 5-yard penalty the Referee is now authorized "to make such ruling as in his judgment justice may require." This was done to make this Article uniform with Article 6 under Rule 11.

22. PAGE 56, R12, S7—This section has always given trouble. An attempt was made to clarify it somewhat in regard to fouls committed after the pass becomes incomplete. It is obviously unfair if Team A makes a forward pass which becomes incomplete 40 yards down the field, and then either team commits a foul in the vicinity of the spot where the pass became incomplete, to give Team A a big gain on an unsuccessful play by penalizing from the spot of the foul. The rule now states that in such a case the penalty "shall be enforced from the spot the ball is next to be put in play." Note also the words "where the ball *is next to be put in play*." This wording is to cover the case where the incomplete pass scores a touchback and the penalty is to be enforced from the 20-yard line.

In paragraph two the words "constitute interference and the offended team shall have the choice of penalties" were omitted, not because they were incorrect, but because it is obvious that the passing team

(Continued on page 52)

Correlation Between Mechanical and Stop-Watch Timing*

By Fred A. Graflund
State University of Iowa

IN this significant study is presented the results of an investigation into the correlation between mechanical and stop-watch timing in dash events. The investigation was carried on by Fred A. Graflund of the State University of Iowa under the direction of Dr. W. W. Tuttle of the Department of Physiology of the College of Medicine. In another investigation carried on by the same laboratory, methods for improving stop-watch timing have been advanced and evaluated.

THERE is considerable discussion going on concerning the disadvantages of using stop-watches for timing sprint races. In fact, there are those who have become quite perturbed when they have been told that, for the most part, the stop-watch system is so inaccurate as to be almost useless as a means of timing races accurately.

Since practical considerations make it necessary to use stop-watches for the timing of the great majority of track events, the question of the use of the watch should be pursued still further.

Object of the Experiment

It seems to us that there is a tendency toward wrong emphasis. Much time and money have been spent in attempting to develop mechanical timing devices. A simple statement to the effect that the investigations dealing with mechanical devices have resulted in either a very expensive apparatus or else one which is suitable only for laboratory purposes seems to cover the situation as it stands. Since this is obviously true, it would seem more practical to attempt to improve stop-watch timing, rather than to supplant it with other more expensive means.

However, before attempting to better the use of the stop-watch, the question of the errors in timing because of its use should be considered further.

The object of the experiment herein reported is to determine how much error is introduced into sprinting times by the use of the stop-watch. This is done by comparing stop-watch times with mechanical times.

Published Literature

A survey of the literature shows that most of the published reports deal with a description of mechanical devices rather than with a study of the errors which are introduced by the stop-watch.

Cureton and Coe[1] investigated errors introduced by the stop-watch in timing races. On the basis of twenty-seven times on nine 30-yard dashes, thirty-five times on fifteen 100-yard dashes and three times on one 120-yard high hurdle race, these investigators found a mean error of —.302 second with a range of —.01 second to —1.07 seconds. From these data it was concluded that "the errors found in stop-watch timing are of such magnitude as to cause grave concern."

In another report, Fetter[2] gave figures for six races, varying in length from 100 meters to 800 meters, where he showed that the difference between stop-watch and mechanical timing varies from —.03 second in the 110-meter hurdle race to —.13 second in the 400-meter hurdle race. When these mechanical times are rounded to the nearest tenth place it is found that in five events the error is —.1 second, while in the sixth event the times are the same. On the basis of these data, which are rather meager, the problem seems to be somewhat less serious than at first suspected.

Technique of the Experiment

In order to study the question still further, a technique was devised and is here described.

THE TECHNIQUE. The technique consists of (1) a means of mechanically recording the time elapsing between the firing of a pistol at the start of a race and the breasting of the tape by the winning sprinter at the finish of the race, and (2) a method for determining the time between these events by the use of stop-watches.

THE MECHANICAL TIMER. The mechanical timer described here is designed to measure sprinting time for purposes of investigation, and is not intended as a practical device for timing races.

The arrangement of the apparatus is shown in Illustration 1. It consists of (a) a signal circuit and (b) a response circuit.

The signal circuit consists of a Dunlap sound key in series with four dry cell batteries and the starting magnet on a Dunlap chronoscope. The sound key is placed near the starter and is kept the same distance from him during all of the experiments. At the instant the gun is fired, the chronoscope dial hand is started and continues to run until the sprinter breasts the tape.

The response circuit consists of the regulation finish tape fastened at one end to the regular upright while the other end is attached to an open switch so arranged that there is a uniform tension on the tape for every race. The switch is in series with a relay and four dry cell batteries which operate the stop magnet on the chronoscope. As the sprinter runs into the tape, the switch is closed and the chronoscope dial hand is immediately stopped. Repeated tests showed that it was necessary only to touch the tape in order to close the switch.

The time elapsing between the firing of the gun and the striking of the tape by the sprinter was read in milli-seconds directly from the chronoscope dial.

THE RELIABILITY OF THE CHRONOSCOPE. In order to test the reliability of the chronoscope, it was checked by the gravity method. It was found to have a lag which

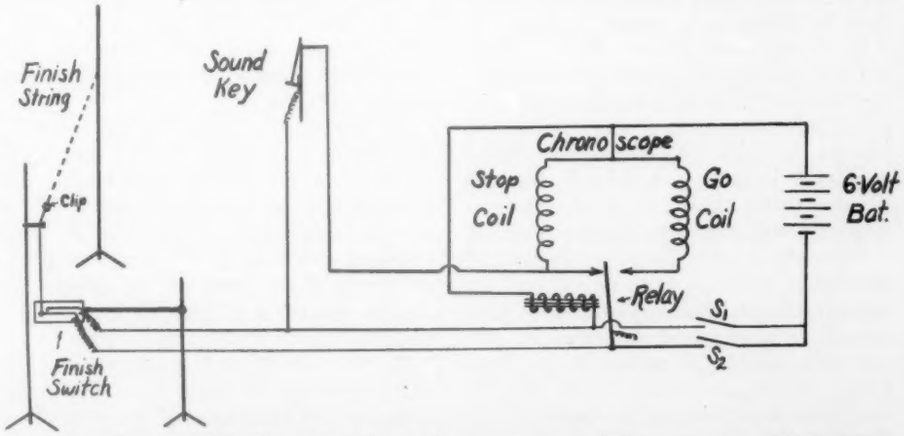


Illustration 1—This illustration shows the arrangement of the apparatus used in this investigation for recording sprinting time mechanically.

*From the Department of Physiology, College of Medicine, State University of Iowa.

[1] Cureton, Thomas K., and Coe, David E. "An Analysis of Errors in Stop-watch Timing." *The Research Quarterly*, V. 4, 94-109, May, 1933.

[2] Fetter, C. H. "A New Way of Splitting Seconds." *Bell Telephone Quarterly*, October, 1932.

was consistently 9 milli-seconds. In handling the data, the times were rounded to the nearest tenth place.

THE STOP-WATCH TIME. The stop-watch times were secured by the usual method employed in timing sprint races. Three times were recorded, the median time being considered as the running time. The timers used had all had wide experience in timing races in competition and can be counted as experts.

All races were run on the regular indoor track at the State University of Iowa field house, and the environment was much the same as that encountered in actual competition. The sprinters used were all members of the University track team. All starting was done by an experienced starter who used the regular competition procedure.

The data collected by means of the technique just described are next considered.

The Data

Data were collected involving five events, as follows: (1) 45-yard low hurdles, (2) 50-yard dash, (3) 50-yard low hurdles, (4) 60-yard dash and (5) 60-yard low hurdles.

For purposes of discussion, each event is presented separately.

1. THE 45-YARD LOW HURDLES. Mechanical and stop-watch times were secured for 80 races. Although the mechanical times were recorded to the thousandth place, they were handled as previously described. The data were secured during the track squad's regular practice hour, and seven different days were required to secure them.

The data showed that in 23 races the stop-watch time awarded was exactly the same as the mechanical time. In 49 races the stop-watch time was .1 second faster than the mechanical time, and in 8 races this difference was .2 second.

For the group, the mean stop-watch time was 6.271 ± .0295 second and the mean mechanical time was 6.357 ± .0294 second. The obtained difference is .0862 ± .0416 second. Since the obtained difference is 2.07 times the probable error of the difference, there are 92 chances in 100 that the difference is greater than zero.

2. THE 50-YARD DASH. Both mechanical and stop-watch times were recorded for 60 races. The data were obtained on five different occasions during the regular practice sessions. Nine different timers were used in groups of three in securing the stop-watch times. As before, the median time was assigned as the running time.

The data showed the mean stop-watch time to be 6.108 ± .0248 second and the mean mechanical time to be 6.218 ± .0241 second. The obtained difference is .1100 ± .0346 second. Since the obtained difference is 3.18 times the probable error of the difference, there are 98 chances in 100 that the difference is greater than zero.

An examination of the data showed also that in 7 cases the stop-watch time and the mechanical time were the same. In 40 of the races the stop-watch time was .1 second faster than the mechanical time, while in the remaining 13 races the difference was .2 second.

3. THE 50-YARD LOW HURDLES. Sixty races were timed by eight different timers in groups of three, as described above. An examination of these data shows that in 11 races the median stop-watch times and the mechanical times were the same. In 44 races there was a difference of .1 second, and in 5 races the difference was .2 second.

The data showed also that the mean stop-watch time was 6.407 ± .0229 second and the mean mechanical time was 6.497 ± .0236 second. The obtained difference of .0899 is 2.73 times its probable error of ± .0329, which indicates that there are 97 chances in 100 that the difference is greater than zero.

4. THE 60-YARD DASH. In this phase of the experiment 60 races were timed on seven different occasions by the same groups of timers, following the plan as previously described.

An examination of the data showed that in 12 races the median stop-watch time and the mechanical time were the same. In 32 races the difference was .1 second, and in 15 races the difference was .2 second. In one race the mechanical time was .1 second shorter than the median stop-watch time. This is the only race in which this occurred. In all other instances the stop-watch times were shorter than the mechanical time.

Further examination of the data showed that the mean stop-watch time was 7.205 ± .0329 second and the mean mechanical time was 7.315 ± .0312 second. The obtained difference is .1100 ± .0453. The obtained difference is 2.43 times as great as the probable error of the difference; that is, there are 95 chances in 100 that the difference is greater than zero.

5. THE 60-YARD LOW HURDLES. In this experiment 60 races were timed, the same method as mentioned previously being used. An examination of the data revealed the fact that in 17 races the median stop-watch times and the mechanical times were the same. In 40 races the difference was .1 second, in 2 races the difference was .2 second and in one race the difference was .3 second. This is the only instance in the entire experiment where the difference between stop-watch timing and mechanical was more than .2 second.

The data showed also that the mean stop-watch time was 7.918 ± .0582 second and the mean mechanical time was 8.000 ± .0575 second. The obtained difference is .0817 ± .0818. Since the obtained difference is 1.00 time the probable error of the difference, there are 75 chances in 100 that the difference is greater than zero.

TABLE I

	Time in Seconds				*O. D.* P. E. difference	Significance
	Mechanical		*Stop-Watch*		*O. D.*	
	Mean	P. E. Mean	Mean	P. E. Mean		
45-yard low hurdles	6.357	± .2625	6.271	± .2641	.0862 ± .0416	2.07	92
50-yard dash	6.218	± .1870	6.108	± .1925	.1100 ± .0346	3.18	98
50-yard low hurdles	6.497	± .1827	6.407	± .1771	.0899 ± .0329	2.73	97
60-yard dash	7.315	± .2419	7.205	± .2552	.1100 ± .0453	2.43	95
60-yard low hurdles	8.000	± .4460	7.918	± .4511	.0817 ± .0818	1.00	75

TABLE II

Event	Coefficient of Correlation
45-yard low hurdles	.9815
50-yard dash	.9948
50-yard low hurdles	.9822
60-yard dash	.9820
60-yard low hurdles	.9815

Summary of the Data

In all of the races investigated, the stop-watch times of 320 races were compared with the mechanical time. A summary of these data shows that in 70 races the median stop-watch times and median mechanical times were the same. In 205 races there was a difference of .1 second, and in 43 races the difference was .2 second. In one race the stop-watch time was .3 second shorter than mechanical time. In one race the stop-watch time was .1 second longer than mechanical time.

The significance of the differences between stop-watch and mechanical timing is shown in Table I.

In order to determine just how closely the stop-watch time and mechanical time are related, the coefficients of correlation between them were obtained and are presented in Table II for each race studied.

Discussion

The reason for rounding the mechanical times to the tenth place was to make them

(Continued on page 52)

Positions of Football Officials In Games

By Lee E. Daniels

FOR fifteen years, Lee E. Daniels has been officiating Western Conference football games. A graduate of Loyola University of Chicago, he is now a practicing attorney. Many officiating problems may be solved by advantageous placing of officials in the field. In this article Mr. Daniels gives his ideas on this subject, which are the result of his own experience and the experiences of many of his fellow officials.

THERE can be no hard and fast rule dealing with the positions to be assumed by the four officials in a football game. However, the officials should be as near each other as seems expedient and, under ordinary circumstances, they should form a diamond or quadrilateral about the ball as pictured in Diagrams 1 and 2.

Many factors should be considered in the placing of officials. Some of these factors are the score of the game, the direction of the wind, the type of offense, the position of the ball on the field, the weather, the ability of the punter, the type of running attack, and the position of the sun and its brilliancy.

Toward the end of the game with A team trailing by a touchdown or a few points, it behooves the Field Judge as well as the Umpire to move back to cover passes and be ready for almost anything, but, with the situations reversed and A leading by a like margin, a closer formation is expedient and even necessary.

On goal line plays, when the Referee may be boxed out, it is suggested that the Field Judge place himself opposite the Head Linesman, as shown in Diagram 3. This allows at least two officials to be in an excellent position to see if the ball crosses the goal line and is afterwards pulled back.

On attempts for field goals, the Field Judge should place himself in accordance with the rules to ascertain whether or not the ball went over or under the bar and should not concern himself with whether or not it was between the posts, which is for the Referee to determine.

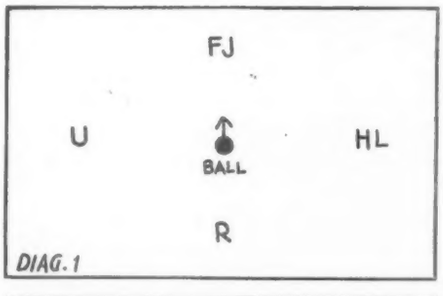
On punt formations, the Umpire should place himself close behind the line of scrimmage and should then float down the field with the tardy linemen. The Field Judge should go deep, favoring the windy side. The Referee should wait until the kick has gone and then go down the field. The Head Linesman should wait the snap of the ball and then tear for the side lines and down the field. Diagrams 4 and 5 indicate the positions before the ball is snapped. Mindful of the factors set out above, note the positions of officials in these two diagrams. Each takes into consideration the wind, which in each case is from a different direction.

Diagram 4 shows team A in punt formation on A's 20-yard line, third down, the wind across the field as shown. Diagram 5 shows the same game situation as Diagram 4, but with the wind blowing strongly from the other way, as indicated by arrow. If the Head Linesman were on the other side of the field, the Umpire would, of course, change his position to keep the team approximately between him and the Head Linesman. For pass play situations, the positions should be approximately the same as for punt situations with the exception that the Field Judge should not be so deep and should probably be slightly nearer the center of the field. Somewhat the same positions should be taken by the officials on running plays.

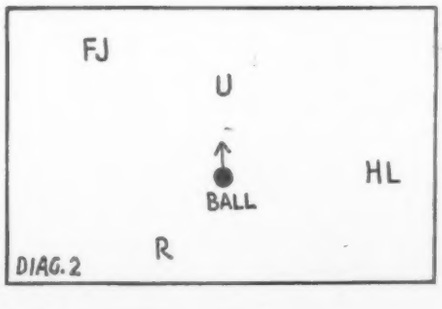
On the kick-off, the officials should place themselves in accordance with the Referee's suggestions. Diagram 6 shows what seems to be the most practical placing of officials.

The Referee thus is ready to fall in behind the offense after the kick. The Umpire, as well as the Field Judge, is in position to fall in behind the defense. The Field Judge is also able to get an immediate check on starting the watch, as well as to check the zone for the five linemen, and the Head Linesman is ready to place his sticks for the normal return of the kick-off.

Many officials and coaches will likely disagree with me, but these are my ideas, and my experience has indicated to me that they are the best.



DIAG. 1



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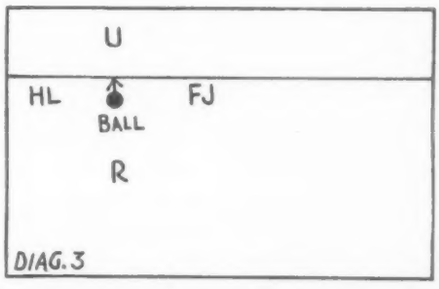
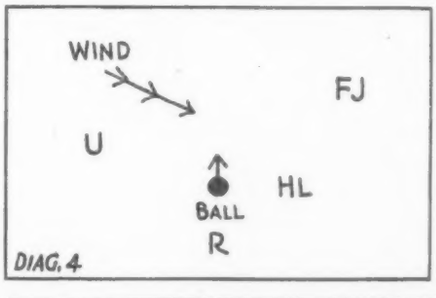
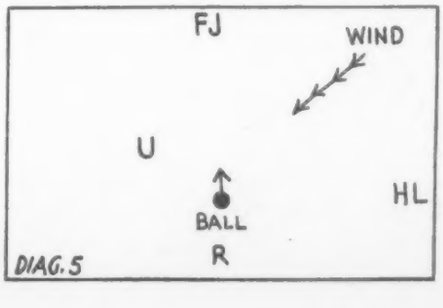


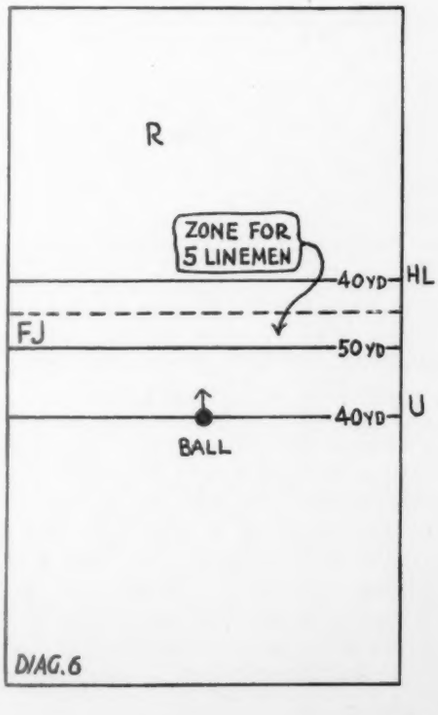
DIAG. 3



DIAG. 4



DIAG. 5



DIAG. 6

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JOHN L. GRIFFITH, Editor

The Football Year Begins

FOOTBALL is with us again. Those who have been wondering whether or not college football is on the decline will undoubtedly this fall see a very healthy and sturdy sport. The fact is that interest in football has steadily increased ever since the modern game was born some fifty years ago. It is true of course that during times of stress, such as the World War or the depression, the people cannot pay so much attention to any of their games as they would like to do, but nevertheless their interest is undoubtedly just as keen then as in normal times.

Ever since 1932, the attendance at school and college games has been steadily on the increase. There is every reason to believe that more people will witness the games this fall than during the autumn of 1935.

Many new coaches will be on the job this month, and many men who have had several years of coaching experience will have moved to new positions. It is always interesting to start in on a new job. There are new problems, a different group of boys to work with and new opponents to be met. The new coach who goes quietly about his task, who does not promise too much and who builds on a firm foundation will last longer than will the chap who in the enthusiasm of the moment moves too rapidly and consequently makes many mistakes. There are no miracle men among the coaches, but sometimes a coach is inclined to let the public believe that he can perform miracles. When the miracle worker fails, then the people invariably blame him and his system.

It is well to remember that systems never err; systems do not commit sins. Those who operate systems frequently, however, make mistakes. We might even say that the systems do not win games, even though it is granted that some systems are better than others. All that a system can do is to make it possible for human endeavor to function with the least wastage of effort and with the maximum of return for intelligent endeavor.

It is a truism that human nature does not undergo radical changes. The coach who understands human nature should, under most circumstances, be a successful coach. Sometimes, after a disastrous season, players lose faith in certain plays or in general with the system that has been followed. Even though the system and the players were not at fault, it is sometimes the part of wisdom to build up confidence by making some modifications. This explains why some of the older coaches have achieved good results from certain types of attack, later haye found these methods unavailing and consequently have changed their offense, only some years later to come back to the original system with good results.

Every coach this fall will make mistakes. The best coaches, however, will make only a minimum number of mistakes. Mistakes in football are costly. Fortunate indeed is the man who next Thanksgiving Day can look back over the season and truthfully say that during the season he made very few mistakes.

Football after all is a game of youth, and it should be conducted primarily in the interests of those who play, and secondarily for the school, the town and the parents who are represented by the teams and the players.

All-Star Football Game

BEFORE the Chicago *Tribune* first All-Star football game was played three years ago, a good many people were inclined to believe that professional football was as much superior to college football as big league baseball is superior to college baseball. The fact is that many of those who were identified with professional football apparently held to this opinion. In that first game neither team scored, but the college team clearly outplayed the professionals.

In the game last year, while the professional players scored a safety and a goal from field, they were unable to score a touchdown against the recently graduated college players. As this is written, before the third All-Star game has been played, the professional teams have not yet scored a touchdown against their younger college opponents. We will not attempt to forecast the outcome of the 1936 game. Apparently the college team will be a bit stronger than the two other teams, and there is a general impression that the professional team this year will play a better game than did the teams of All-Stars in 1934 and 1935.

It was reasonable for the sports writers and the public prior to the 1934 and 1935 games to assume that the professional team would be vastly superior to the picked-up team of college stars. Members of the Chicago Bears in 1934 and 1935 and the Detroit Lions in 1936, teams composed exclusively of former college stars, have played together for a number of years. Every coach knows the value of game experience. Very often a boy performs exceptionally well in practice but has glaring faults which are revealed in close games. The 1936 All-Star players will have been together for two weeks prior to the game on September 1st. As this is written

they are working industriously and will no doubt give a good account of themselves. They will go into the game, however, lacking the game experience that the members of the professional team will have had.

It is interesting to consider why a team made up of selected college star players with three or four years of game experience beyond college days is not vastly superior to a team of younger college stars lacking in game experience. We will not attempt to advance an opinion regarding this question but are content to close with the observation that the myth that a professional team is vastly superior to a college team has been exploded.

The 1936 Olympics

THE school and college coaches have no doubt noted that, in the recent Olympic Games, the United States won in six divisions; namely, track and field, men's swimming, women's swimming, basketball, wrestling and the pentathlon. With the exception of the pentathlon, these divisions have to do with sports that are very largely dominated by the schools and colleges. In none of the other fifty-nine nations competing in the 1936 Olympics are the educational institutions in such large measure looked upon as athletic units. This perhaps partly explains why we excel in sports that are promoted by the educational institutions.

Final unofficial but generally accepted scores in all divisions of the 1936 Olympic games gave Germany 134 points and the United States 77½ points.

Germany may be generally considered as having won the 1936 Olympics. Her victories for the most part were in gymnastics, canoeing, yachting, cycling, shooting, equestrianism, fencing, hand ball, water polo and the like. If the American schools and colleges were to concentrate on these and other such sports, we perhaps might reasonably expect to win the Olympic championship four years from now in Japan.

We as a people are justifiably proud of the record made by our men, all of whom were college trained in the track and field events. If we accept the usual standard of measurement, giving the winners a score of 10, the second place men 5 points, third 4 points, fourth 3 points, fifth 2 points and sixth 1 point, then the American team rolled up 203 points in the track and field division. A few of the place winners were recent college graduates, but for the most part the points were won by undergraduates. Victory in the track and field division gave the United States 10 points in the final Olympic standing.

Someone has pointed out that in the last fifty years there have been eighteen great new industries developed throughout the world, all of which were developed in the United States. Two of these industries, rayon and radio, were originated in other countries but they were developed in our own country. Why is it that none of the other fifty-nine nations developed any of these great industries? Is it because we operate under the free enterprise system?

Our track and field athletics are conducted in the same manner that our economic system has been conducted. In the schools and colleges every boy, irrespective of race, color or religion, is guaranteed an opportunity to try to make the team. The team is selected solely on the basis of competitive merit. Very often a superior athlete fails in the final trials. Perhaps if such an athlete were taken to the Olympic Games he would win, because all men have off days in athletics. Nevertheless, the democratic principle is adhered to. So long as we follow this system and so long as the schools and colleges foster amateur athletics, we may reasonably expect to predominate in such sports as are to be found on the school and college athletic programs.

Olympic Finances

AVERY BRUNDAGE, President of the American Olympic Committee, has released a story concerning the rejection of an offer of a sizable sum of money made by a reputable manufacturer of food products to the Olympic Fund. In return for the check, which was to be made payable in advance, the Olympic Committee was expected either to announce or to permit others to announce that the Olympic athletes each day ate the food in question. The Olympic Committee needed the money very badly. Some people no doubt will charge the members of the American Olympic Committee who refused the offer with being foolishly idealistic. Others will perhaps agree that somehow or other it is not consistent with the ideals of amateur sports for officials of sports organizations to sell their endorsements.

It might have been argued that since the money was badly needed and since it would be spent for a worthy cause—that is, for the expenses of our young men and women athletes to and from Berlin—the Committee should sell its endorsement of the food in question.

Further, some fluent speaker might have called attention to the responsibility that the Olympic Committee owed to the young men and women and to the fathers and mothers of these splendid Americans who were going to Germany to represent the United States. Of course, he would dwell upon the fact that the Committee could not afford to permit the athletes on ship board or while they were in Germany to eat any food that had not been inspected by the Committee. If the Committee inspected the various foods and found that it was best for the athletes to eat the food that the Committee was to endorse, then it would be no more than right for the manufacturer to pay the cost of inspection. Of course the amount left, over and above the actual cost of inspecting the various factories, would be turned over to the Olympic Fund.

These are interesting questions which might with profit be debated. We shall be glad to have the opinions of any of the ATHLETIC JOURNAL readers who would like to send in their points of view. We shall start the discussion by saying that we spoke in favor of the action taken by the Olympic Committee and so voted.

Football in the Small High School

By S. A. Cooper
Roosevelt High School, Cedar Rapids, Iowa

S. A. Cooper

THE purpose of this article is to bring out and discuss a few of the things which may be helpful to the coach in the small high school who is faced with the problem of building a football team with a limited amount of material. Some of the ideas are not new but nevertheless may still be helpful.

When a squad of fifteen to thirty boys reports to a coach, he is naturally concerned that his group will remain nearest the top figure throughout the season. However, when the season is about half over he will usually find his squad reduced to a smaller number because of outside work, injuries, the dropping out of the "softies," ineligibility and other things possibly beyond his control. Of those players who remain, there will be some lightweights who are not able to stand the contact work with the larger boys.

Keeping the Squad at Capacity

Fortunately the coach can do much to keep his squad members on the job. His first duty is to create a group spirit. Most of the boys are thoroughly acquainted with each other, and it is not hard to achieve loyalty in such a group if they are properly approached. This subject should be brought up at the first practice and kept alive throughout the season. Each boy must be made to feel that he is an important "cog in the wheel."

As with any squad, the work must be made interesting. An interested squad is a hustling squad, and no boys will be lost because they became tired of the same old "dish." Interest is not difficult to keep up the first few weeks, but after that the fundamental drills should be varied somewhat. A new play or so each week will keep the boys "pepped up" and they will be anxious to try them out in the coming game. A little horse-play on Monday nights, especially after a game is won, will stimulate interest and good feeling for the remainder of the week.

Condition

One of the most important things naturally is condition. The loss of one or two boys from the first string of a small squad may be even more disastrous than the loss of four boys from the larger squad where replacements may be made just a little bit easier. The boys may easily be taught to wrap ankles, and this wrapping should be done by each player before every practice. A large per cent of football injuries is confined to the ankles, and since this can be greatly reduced by correct wrapping it would be folly to neglect this part of training.

Constant work on passive blocking and tackling with form continually stressed will build up arm, shoulder, back and leg muscles. Work of this nature will reduce the number of boys who are "ground shy" and will teach them to fall relaxed, thus avoiding many bruises. Tackling and blocking work should be only for form the first week, as a hard tackle with a soft shoulder may mean an injury to be nursed throughout the season. Careful supervision is needed, as the boys are feeling good at the opening practice sessions and are eager to show how hard they can hit.

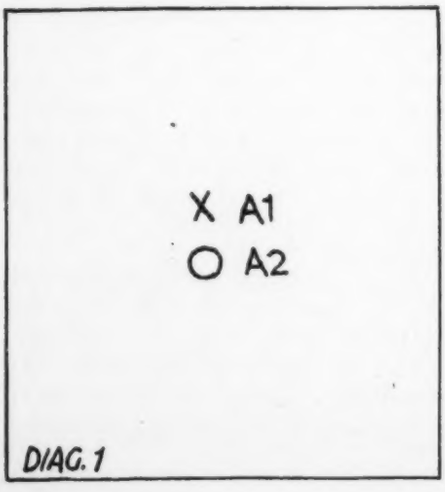
Conserving Personnel

No matter how small the squad, a great deal of time may be spent on the passing game. Every detail can be carefully worked out, as there will be only a few receivers and one or two passers. Any team without a passing attack will find it hard to win games. A passing game is especially desirable for the small school team for two reasons: There is less chance of injury in the open game. The running and plunging game is more exhaustive and bruising. A team that plays eleven or thirteen boys during the course of a game is apt to wear down before opponents who can use twenty-two boys in the game.

The switching of boys in the line-up sometimes proves helpful. For instance, the best guard, tackle and end may be used on the right side of the line on offense, and on defense the right guard, if a good defensive player, may be shifted to left tackle. Regardless of the offensive positions played, the three best defensive boys might probably be used to best advantage at the tackle and fullback positions.

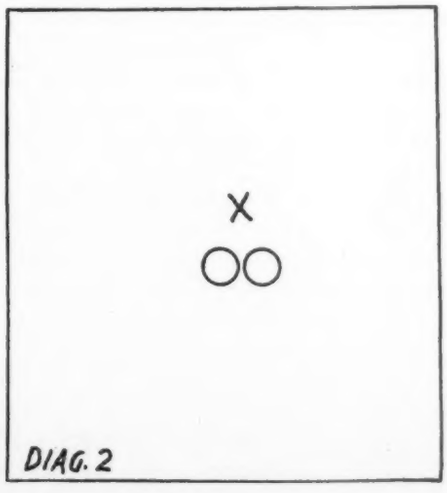
Group Drills for Small Teams

The accompanying diagrams show a few of the group drills which may be used where there is a limited amount of material. Diagram 1 is a simple set-up for



DIAG. 1

AS both football and basketball coach, Stewart A. ("Sam") Cooper has had outstanding success. After graduating from Iowa State Teachers College in 1931, he coached for four years at Albert City, Iowa, High School. Last year, he joined the physical education staff of Roosevelt High School, Cedar Rapids, Iowa. He discusses here some of the problems faced by the average coach in the small high school.



DIAG. 2

Night Football Under Perfect Conditions

Proper lighting is essential to the success of night football. The entire playing area must be evenly lighted as a moving object passing from a dimly lighted area into a brightly lighted area or vice versa, gives the appearance of a change in speed. There must be light above the field in order that high punts may be followed and at the same time there must be no glare in the eyes of the spectators or players.

There are two distinct methods of lighting football fields. One method requires the use of open type floodlights mounted on poles along the sides and close to the field. This method is for lighting fields with small bleacher sections. In the other method enclosed type floodlights are used, being mounted on towers outside the stadium, as shown in the accompanying illustrations. This method is for lighting stadiums or fields with large bleacher sections.

Complete information will be furnished upon request.

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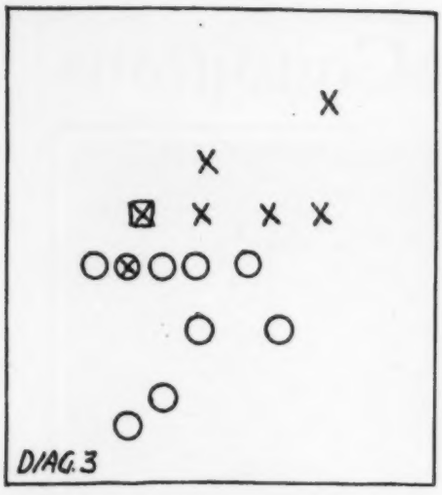
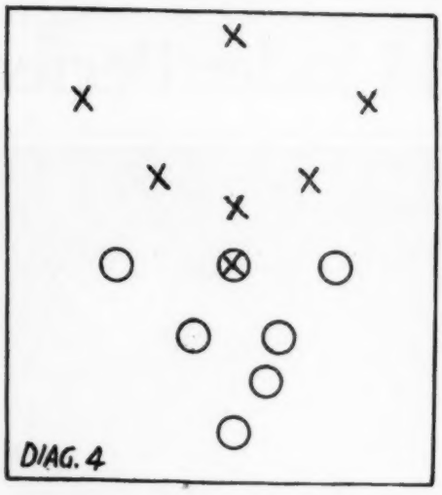
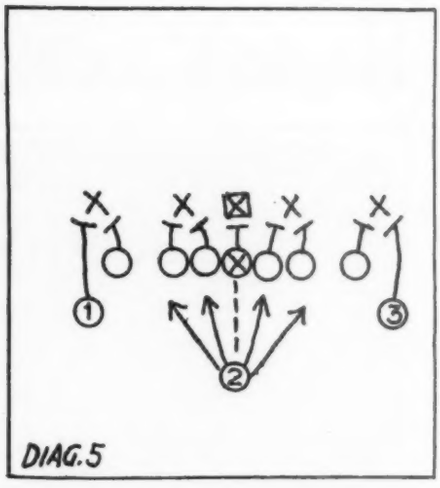

DIAG. 3


DIAG. 4


DIAG. 5

tackling and blocking practice. In tackling, A2 assumes his stance and drives into A1 just above the knees. A2 alternates shoulders and A1 falls relaxed. In blocking, A1 moves to the right of left for the long-body block and comes to the scrimmage line when the shoulder or pivot block is to be used.

Diagram 2 shows the old stand-by where two offensive players team up on the defensive man. The squad may be divided and work at the drills shown in Diagrams 1 and 2, charging at the sound of the whistle. The coach should be at the end of the line so that he may have a clear view of the entire group.

Diagram 3 illustrates an offensive and defensive drill which may be used when there are not enough boys for a regular scrimmage. Fifteen boys are needed for this drill, and of course only strong-side plays are used. The same set-up may be used to the left with the boys changed around so that they all get defensive and offensive work.

Diagram 4 shows a drill including thirteen players for offensive and defensive passing work. Pass plays are used with the defense trying to intercept the pass, or else tag or tackle the runner. If the pass is intercepted, the receiver may try to run it out until he is tackled or tagged, as desired.

Fifteen boys are required for the drill illustrated in Diagram 5. It is primarily an offensive drill to develop line charge, but it also gives the ball-carrier practice in line plunging, starting, cutting and finding the openings. He has the option of hitting any hole in the line. The offensive ends and wing-backs drive their tackles out; the guards and tackles drive the opposing guards as far back as possible; and the center blocks the center either way. Backs 1, 2 and 3 alternate positions.

Advantages of the Small School

In conclusion, we may say that we find the coach of the small high school, even though the material may be limited in numbers, has some things in his favor. A few are listed as follows:

1. Group spirit is easier to promote because of the fact that there are fewer outside interests.
2. There is an added incentive to defeat the larger school.
3. The coach may give each squad member more individual attention on every detail, and progress is made more rapidly.
4. The first string may have more time for signal drill and dummy scrimmage, thus getting the plays well learned and thoroughly timed.
5. Since team scrimmage is sometimes impossible, there is no danger of over-scrimmage, and the boys are ready to go at game time.
6. The boys are easier to condition, since usually a large number of them live in the country and are robust in health. They are also used to hard work, and when the going gets hard they are the last to become tired.

Center Jump Formations Under the 1936-37 Basketball Code

By Clifford Wells
Logansport, Indiana, High School

UNDER the basketball code for 1936-37, Rule 1, Section 3, reads as follows: "Around the present center circle there is to be a concentric circle six feet in radius. This circle will be a solid line, two inches in width, and its purpose is to serve as a restraining line for the players not engaged in the center jump, to prevent crowding and rough work."

The above rule will give the good jumper and tall center a more distinct advantage than ever before. My players have been able to steal the tip and take away part of the tall center's advantage over my team by crowding around the center circle at times, but now with this new rule, which forces players to spread out over a larger area, it will usually be very hard for them to get the ball.

HOW will the new restraining circle provided for by the 1936-37 basketball code affect actual play? In this article, Clifford Wells, a thorough student of the game, analyzes the situation and presents methods that may be resorted to by the team controlling the tip-off, as well as by the team which is unable to control the ball at center. For a number of years, Mr. Wells has coached the Logansport High School team, which is always among the leaders in Indiana basketball.

Suppose you elect to play man-for-man and attempt to go in with the player assigned to you in an effort to steal the ball. Screen plays will work on you very well and will force you into lining up in safety or defensive formation, which will mean allowing the center of the opposing team freedom to tip back to his back guard. In this case you are forced to give up the tip without much of a fight.

The Diagrams Explained

In Diagram 1, suppose that team A is getting all tips at center and that team B is playing man-for-man, each player attempting to go in with his man in an effort to steal the tip. This screen play would work out beautifully for team A.

COACHES OF NATIONAL REPUTATION USE AND ENDORSE KEN-WEL FOOTBALL EQUIPMENT

ANDY KERR
Head Football Coach of Colgate University

•

VIC HANSON
Head Football Coach of Syracuse University

•

MORLEY JENNINGS
Head Football Coach of Baylor University

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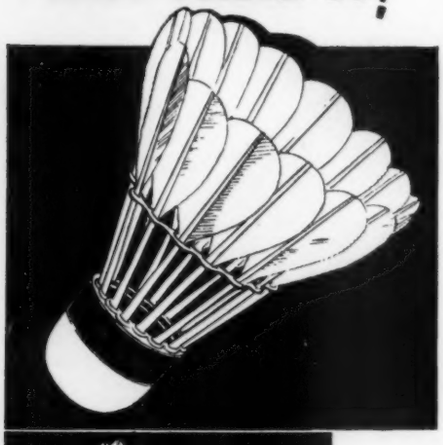

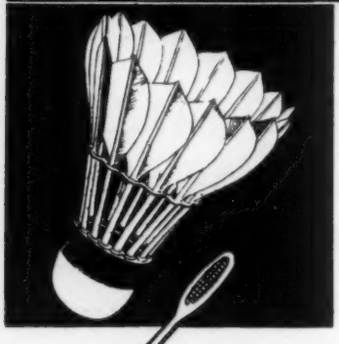

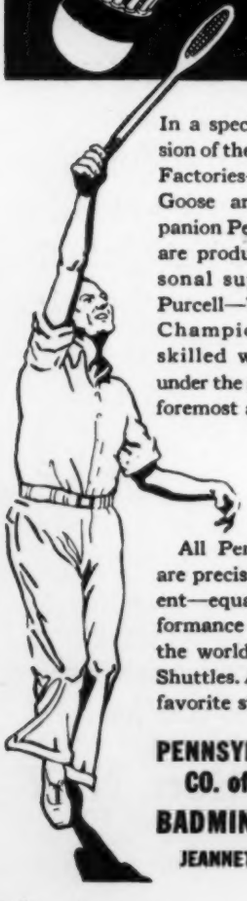

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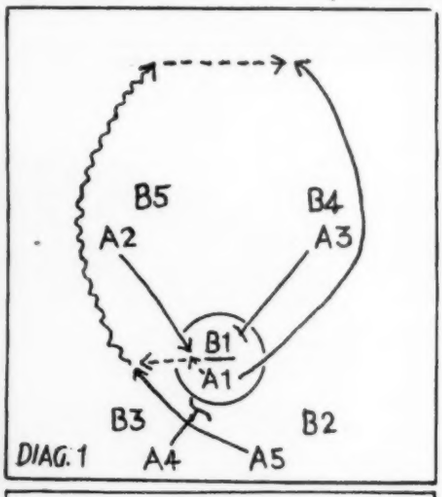
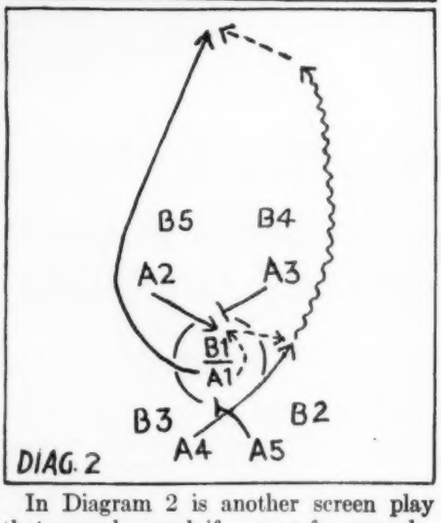
The center on team A tips to forward A2, who comes in to receive the tip. In turn A2 tips to A5, a guard who has gone around a screen made by A4, another guard. A5 may dribble down the side of the court and in to the goal or pass to A1, the center, who has cut around the screen made at center by A3, a forward.



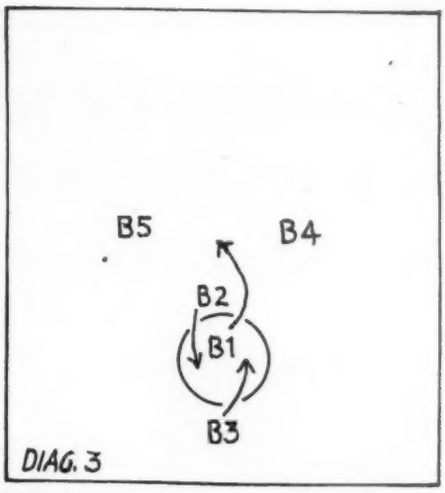
DIAG. 1



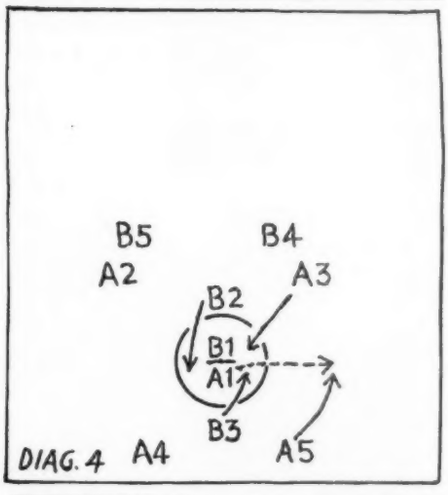
DIAG. 2

In Diagram 2 is another screen play that may be used if a man-for-man defensive formation is still being used by team B, and if team A continues to control the tips at center. In this play, guard A5 goes in as if for the tip. A4 goes around the screen formed by A5. A1, the center, tips the ball to A2, who has his man screened out by A3, after A3 has made a bluff to go in for the tip. A2 tips to A4, who may dribble down the side of the court and in to the goal or pass to A1, going in on the side of the court.

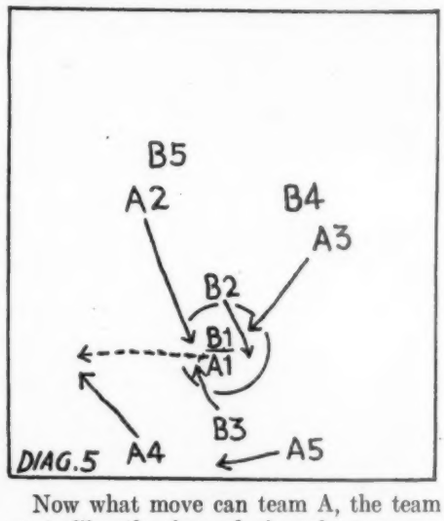
Now suppose that the A team center controls the center jump but the defensive team plays a Y formation in an effort to steal the ball. In this attempt to get the ball, team B lines up as in Diagram 3. In In this defensive move, B2 goes in for the tip, as the arrow shows. He goes in hard and high. B3 goes in on the opposite side. B1, the center, gets out of the circle and back so that team B has four men in good zone defensive position to check the play of team A until B2 can get back to help out.



DIAG. 3



DIAG. 4



DIAG. 5

Now what move can team A, the team controlling the tip, make in order to secure possession of the ball? I would line my boys up as is shown in Diagram 4. Now A1 should tip wide, perhaps to A5. If B3 starts to follow A5 wide, the ball may then be tipped in close to A3. Should the other team shift and send B2 and B3 down the opposite sides, then the weak spot in this play would be on the opposite side of the court. A2 should then come in for the short tip, and A4 should go out for the wide tip, as is shown in Diagram 5.

Let us suppose the defensive team

(Continued on page 48)

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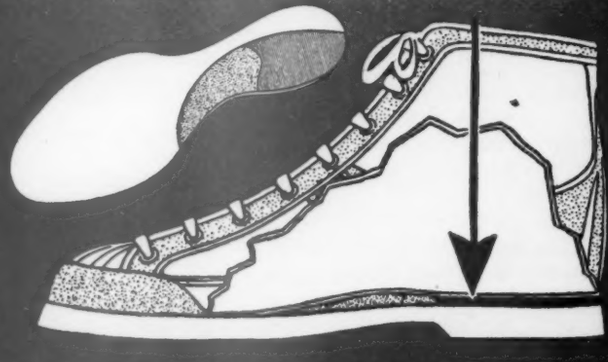

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Principles and Methods in an Intramural Sports Program

By Everitt L. Mossman
University of California

IT is difficult to estimate with accuracy the size and growth of an intramural program. Of the 8,269 men students, graduate and undergraduate, enrolled at the University of California on the Berkeley campus during the spring semester, 1936, it is estimated that 27.3 per cent took some part in the intramural sports program.

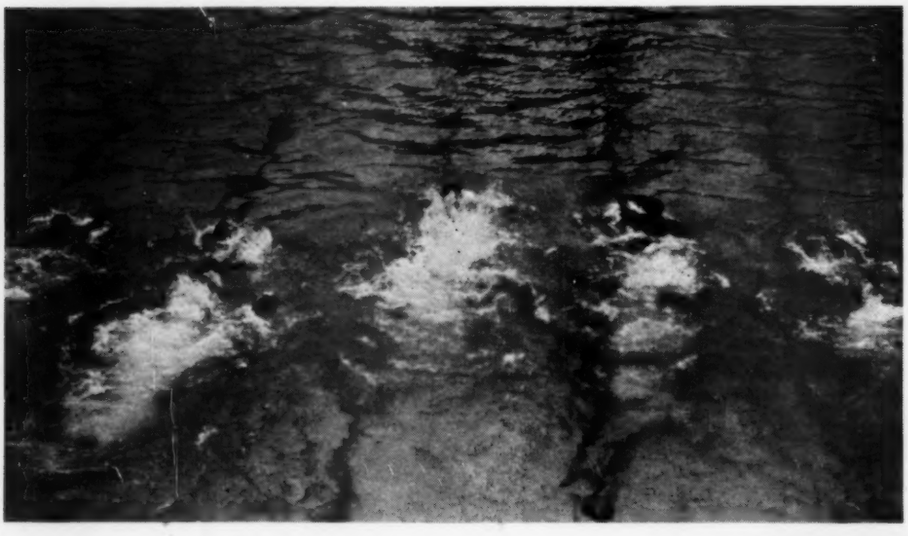
This is merely a rough estimate, since no effort has been made to record the name of each competitor to eliminate the possibility of counting one individual more than once. A more nearly exact figure, however, would not give a true picture of intramural activity at the University of California, because it would not indicate the degree of interest and enthusiasm of the participants, nor the extent to which individuals participate in more and more phases of intramural activity, nor the improvement in caliber of playing ability on the part of individual men.

Four years ago the intramural program at the University of California consisted of competition in softball, tennis, basketball and touch football by about fifty fraternities on a single-elimination tournament basis, two track meets and two swimming meets each year and occasionally a handball tournament or interclass competition in various sports. A program was needed that would reach more students and assure more nearly continuous activity for those reached.

At present, besides the fraternity competition in the above mentioned sports, some thirty non-fraternal organizations also participate. Competition in American football, regulation baseball, water polo, soccer, table tennis, squash, wrestling, golf, crew, handball and badminton has been added. The single-elimination tournament system has been entirely superseded by double-elimination and round-robin tournaments. Men interested in individual competition are given opportunities on permanent tournament ladders in all sports adapted to such. Unorganized students are organized for team competition. (The latter two phases of the program in connection with the offering of physical education credit for intramural sports competition were fully discussed by the author in the November, 1935, issue of THE ATHLETIC JOURNAL.)

These facts are mentioned merely to emphasize, as a foundation for the following discussion, the conviction that development is taking place in the intramural program not only in number of participants but in other important ways as well. There is no need to measure this activity. It is sufficient that it exists with increasing enthusiasm. If that were not the case, the sports and systems of competition being offered would fall of their own weight.

Everitt L. Mossman



The program has not been completed. It is developing. In this development during the past three years, certain principles and methods have been used to advantage. There is no wish to infer that this field has been exhausted. Listed here are merely

(Continued on page 43)

THE successful league and ladder system in use by the Intramural Department of the University of California was discussed by Everitt L. ("Spud") Mossman in an article published in the November, 1935, issue of this periodical. This article called for a second. In this issue, Mr. Mossman describes the general principles and methods employed in the recent development of California's intramural sports program, which has been carried on under his supervision.

Coaches' Ready Reference Buying Guide

THIS guide is presented for the convenience of coaches in planning their purchases for the athletic department. Under each sport and under the headings "Athletic Field Equipment," "For the Gymnasium" and "Playground Equipment" are listed the names of reliable manufacturers who can supply the many and various needs of the coach.

The address of each manufacturer is listed on page 56. Booklets or catalogs offered by some of these manufacturers are listed with the addresses. Manufacturers will appreciate having coaches mention the name of The Athletic Journal when they write. All of the manufacturers listed in this guide carry or have carried advertising space in the Athletic Journal and are therefore anxious to co-operate with its readers.

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Pipal, J. A. (Football)
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In the 1935 championship game of the "Pop" Warner Football Conference, Senior Division, Carl Ruzicka of the Cheltenham Jayvees is shown carrying the ball off tackle against the Village Gunners. The game was played on the snowy turf of Frankford Memorial Stadium on the Saturday before Thanksgiving. The Jayvees won, 13 to 0.

A Comprehensive Sandlot Football Program

By Joseph J. Tomlin

SANDLOTS need no introduction to the average American sports fan. As they were forty years ago, so they are today, sandy lots and dusty fields where boys from the city streets indulge in unorganized sports. Whether the game is baseball or football it's the same old story—players in uniform and players in street clothes. It's a great American circus, with pretzel man and peanut vendor included.

What is true of the nation is true of big sprawling Philadelphia. Here, too, sandlots abound; hundreds of them. Thousands of games take place during spring, summer and fall seasons. The majority end in scores that satisfy the fans and the winning teams; others are not so easily completed. Some result in heated arguments, or in bitter protest to the decisions of the referees. These are sometimes settled peacefully with the visiting players picking up their equipment and leaving the field and an unfinished game. Others end in a dramatic fashion, with players, officials and spectators in a robust free-for-all, only to find the city gendarmes the ultimate victors.

Need for Organized Play

For one reason or another, Philadelphia never had a central sports clearing house to promote the welfare of the sandlot athlete. This little matter was left to the professional sports promoter or booking agent, who was commonly a salesman for a retail sporting goods house. The income from this source furnished him a comfortable living, and naturally his interest in sandlot sports was primarily a commercial one. The more games he booked, the more contacts he had; and the more teams he managed, the more sporting goods he sold.

Down went the stock market, up went the banks. Over 12,000,000 unemployed walked the streets. Schools poured out bright-eyed and eager youngsters to face "No Help Wanted" signs. National heroes Jack Dempsey and Babe Ruth were replaced by Al Capone and Dillinger. Kids took to toy guns and games of the "hands up" variety. Higher and higher rose the juvenile crime wave.

Astonished to find that 26 per cent of his taxes went toward the maintenance of institutions dealing with crime, the Philadelphia citizen suddenly became interested in its prevention. Eventually this led to his being boy-conscious. A crime prevention association was founded. Another movement stressed religion for the young. A sporting goods store sponsored athletic tournaments for sandlotters. The board of education opened school buildings for evening recreation classes. The Federal Government poured funds into projects of a similar nature.

The Philadelphia Awakening

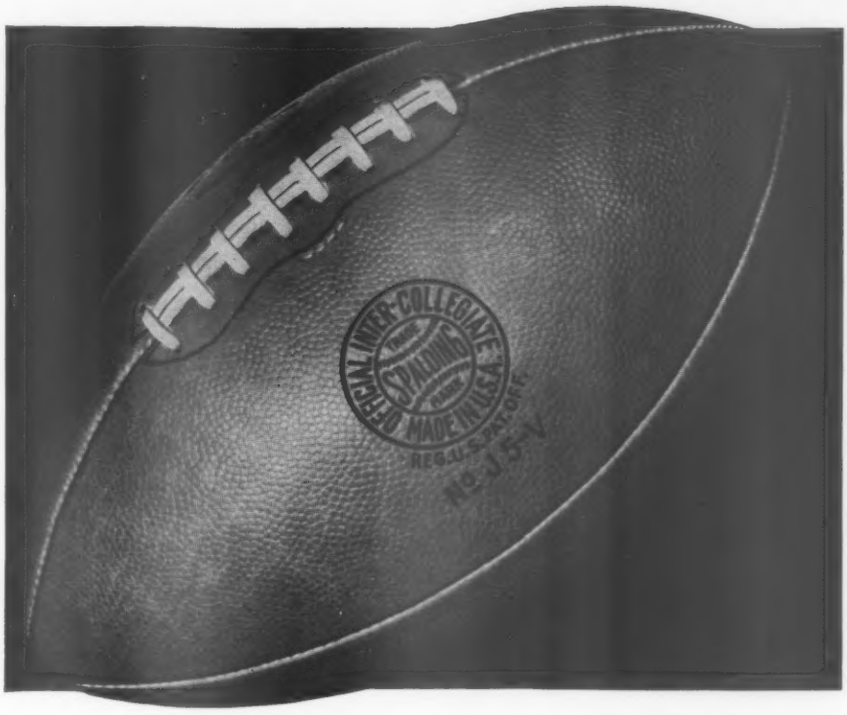
Such was the situation in March of 1933, when a group of business and professional men met at the Northeast Philadelphia Chamber of Commerce. The remarkable feature of this gathering was that the community banker and broker, teacher and preacher had finally awakened to the fact that the boy from the city streets and street corners, who sought recreation on the unsupervised sandlots, needed their support and interest as did the boy in school and on public playground. The gathering, therefore, set as its primary objective that "of giving boys responsible supervised opportunities to indulge in clean, healthy sport and to create a clearing house which would serve as a means of eliminating dangers of unorganized, unsupervised sandlot athletic games." Also passed was a resolution to make a survey of the city's recreational facilities and needs, especially where they concerned the sandlot boy.

The results of the survey proved amazing in their statistical condemnation of the existing play facilities. It discovered 133,000 boys, between the ages of eight and twenty-one, engaged in street and sandlot sports without an iota of responsible supervision. It revealed sports run on a dog-eat-dog basis, with the stronger,

---

A NATIVE of Philadelphia, Joseph J. Tomlin played end and tackle at Swarthmore, from which he graduated in 1927. After a year at Harvard Law School and four years in Wall Street, he returned to Philadelphia, where in 1933 he was instrumental in founding the "Pop" Warner Football Conference, of which he is Executive Secretary. Always interested in boy problems, he helped to organize the First American Youth Congress in New York City in 1934. He was also a non-paid, non-political advisor during the organizing process of the National Youth Administration. Mr. Tomlin will be glad to co-operate with anyone seeking to develop a program similar to the one he describes in this article.

Meet a Great Gridiron Star



Again this season, as in past years, the Spalding Official J5-V Football will play a big part in putting the nation's gridiron engagements on the front page.

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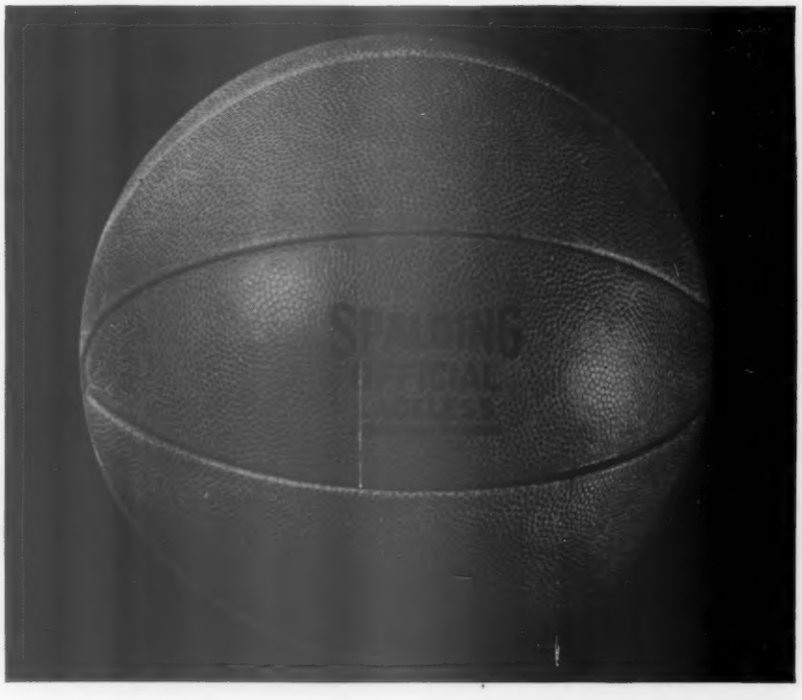

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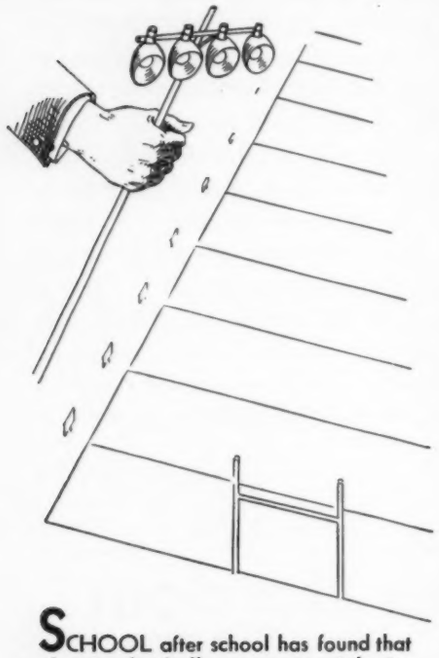

SCHOOL after school has found that playing football games at night increases attendance three, four, even eight times. Albert Lea, Minn., has jumped gate receipts 800 per cent. Erie, Penna., boosted its attendance to 3500 — 500 per cent over day games. Yoakum, Texas, High School has increased revenue 3½ to 4 times. Dunkirk, N. Y., reports attendance up 300 per cent.

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older boys in command of the situation, who were in turn dominated by aggressive sports promoters seeking easy money. Youngsters under twelve years of age were forced into dangerous street play; those few who were fortunate enough to play on a ball field could do so only on Saturday and Sunday mornings. About 40 per cent of the sandlot teams played organized baseball, but only 22 per cent played organized football. Injuries rose sharply with the increase of football's popularity as a sandlot sport.

The survey prodded the citizens' committee to the immediate organization of an athletic league for sandlot teams. Football was the first step. Not only was the fall season just around the corner, but the game's character building qualities appealed to the men. There was also the challenge of mounting football injuries.

Plan of Organization

Plans for the civic football program were introduced to the Philadelphia sandlotters early in October of 1933, in the auditorium of the Northeast Philadelphia Chamber of Commerce. Although forty clubs were represented at this meeting, only sixteen joined when the league opened its schedule a few weeks later. This was, no doubt, the result of the late opening of the season and of the fact that only teams averaging 140 pounds were invited. The organization was named the Junior 140-Pound Football League.

The following spring Glenn S. ("Pop") Warner, football coach at Temple University, came into the picture. At a spring rally of sandlot football players, held in one of the city's high schools, 800 boys petitioned Mr. Warner to permit the organization to be renamed the "Pop" Warner Football Conference. Mr. Warner's co-operation in this matter worked a miracle. His name not only flooded the Conference office with applications for team membership, but it also recruited prominent civic and business organizations in endorsing the program.

Under the Warner banner the Conference prospered during the 1934 season with a membership of 107 clubs. The movement was taking on a semblance of a big league organization. A full-time director of activities was appointed. Meetings were held at the Philadelphia and the Northeast Philadelphia Chambers of Commerce as well as at Temple University. The Conference was divided into four units, each representing a different section of the city. There were also four weight divisions: the Seniors (150 to 160 pounds, team average); the Juniors (140 to 150 pounds); the Minors (130 to 140 pounds); and the Midgets (120 to 130 pounds).

Two types of membership were now made available. "Full-fledged" members played a schedule arranged and supervised by the Conference, with signed player contracts and a definite set of rules. One such rule defined the popular "Warner system of scoring," whereby a tie game was awarded as a victory to the team making the most first downs. Full authority over these teams was vested in a Board of Judges, composed of the boys themselves. On the other hand, the "associate" members were independent teams that asked the Conference to act as their booking agency, and paid a 25 cent fee for each game scheduled. The Conference had no direct authority over these clubs, but it was willing to serve them, hoping that later they too would become full-fledged members.

Splendid as was the growth of the first two years, it remained for the 1935 season to surpass even the fondest dreams of the Conference founders. Membership grew to 144 teams. Units were established outside of Philadelphia, a Junior League in New Jersey and one in Delaware. A free medical fund was established by the Philadelphia Lions Clubs. Complimentary tickets to four local college football games were given the members. Funds were promised to send the Senior League champions to Florida for a Christmas Day game with Miami High School. Unfortunately, at the last minute, this trip fell through because of a ruling of the Florida Interscholastic Athletic Association prohibiting its high school teams from meeting non-school organizations in athletic contests.

Planning the Season

So much for the history of the Conference! The month of August is a busy one for the Conference staff since the whole fall program is arranged at that time. Each of the 3,000 odd members receives by mail a prospectus of the plans for the approaching season. This includes the football school catalog and applications, mimeographed notes on pre-season training and conditioning, Conference membership application blanks and contracts, and six other pieces of material.

Immediately after Labor Day, the Conference Football School opens evening sessions at Temple University. The courses run two weeks and are free to members. Last September the following football coaches lectured: Harvey J. Harman and Albert Kruez from the University of Pennsylvania; Martin Brill and Jim Henry from La Salle College; Fred Swan, John Logan and Glenn S. Warner from Temple University; Walter H. Halas from Drexel Tech; Harry Stuhldreher from Villanova College; and Elwood A. Geiges from Frankford High School, Philadelphia. The crowning event of the school was an informal debate between Harry Stuhldreher and "Pop" Warner on the merits of the Notre Dame and the Warner systems.

Opening the Season

After completion of the coaching school, the city newspapers each year announce

the Conference plans for the season, and then comes the rush of registration. As the boys apply for membership they are given forms to fill and contracts to sign. Interesting statistics are in this way gathered as to the boys' athletic, economic and character status. They are also given the opportunity of a free physical examination. With the exception of the younger boys, this examination is not compulsory, although the Conference has tried to make it compulsory for all members. The older sandlot players prove a problem when it comes to reforming their long established customs. Most of them resent physical examinations as so much useless red tape.

The season opens the first week in October and continues five weeks before play-offs commence. This short schedule permits Conference teams to play non-Conference clubs, who often are natural neighborhood rivals. Title games for the Seniors and Juniors are played the Saturday before Thanksgiving in the form of a double-header. The Minors and Midgets decide their championships the following week.

Sixty per cent of the football fields used by Conference teams last fall were unfit for grid contests. Many were former city dumps, covered with a layer of stone-studded, clayish soil, which hardened to concrete form with the arrival of frost. Other fields lacked full gridiron dimensions, and eighteen were without goal posts. Of the fields that were considered in good condition, 8 per cent were fenced and 32 per cent were open lots with the playing area roped off.

Support for the Teams

That sandlot football games draw poor gates is general knowledge around Philadelphia. The best gate on an open field during the Conference schedule last fall was $29.15, while the poorest collection amounted to 60 cents. The average take per team last season was $5.91 per game, a sum not even meeting the minimum expenses of the home team.

Community interest and support of these teams originally depended upon the initiative of the team manager or coach. The majority of these men and boys knew nothing about the proper appeal for community support, and their efforts were naive and rudimentary. There was the usual sale of chance cards and tickets, the running of block parties and dances, and door-to-door solicitations. The Conference spent a great amount of effort in this matter, assisting teams in organizing adult booster groups in their respective communities. Nineteen teams were financed in this manner last fall.

Coaching and Equipment Problems

As a whole Conference teams are poorly coached, only 3 per cent of the coaches being former college players. About 16

(Continued on page 41)

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Soccer for Junior High School Boys

By Virgil J. Noble
South Intermediate School, Saginaw, Michigan

Virgil J. Noble

SOCCER BALL has long been the pet aversion of athletic coaches, and small wonder. Their college training affords but scant information and often no practice along this line. American football is so emphasized that soccer is thrown into complete eclipse. So it often happens that the young coach's only guide is a rule book. When he casts about, as he will if he is in earnest, for informative books and magazine articles, he soon exhausts the supply and is forced to fall back upon his own trial and error experience. The game becomes a sort of haphazard affair and seldom attains great popularity.

No teacher ever achieved very excellent results trying to teach that about which he knew but little himself. The average coach continues to use soccer because of an admitted need for outdoor activity for the immature boy in intermediate and junior high grades not yet ready for football. These years must hold some sort of training to pave the way for American football later. Soccer seems to offer the best substitute yet to be brought forward for that purpose and has a more scientific basis than is generally understood. It has a very definite technique and when less indifferently taught becomes interesting and even fascinating.

Three particular drawbacks have caused it to find disfavor among many junior high coaches: (1) lack of scoring opportunity; (2) a large number of tie games; (3) difficulty in controlling the ball. It has been demonstrated, however, that a few rule changes and a thorough course in the fundamentals of the game may be made to minimize these hindrances, and to bring soccer ball up from its makeshift position to the popularity it should enjoy.

Rule Adaptations

In Saginaw, Michigan, soccer ball has been a fall sport in the four junior high schools over a period of thirteen years. Because the town is more than usually soccer-minded, the various coaches have undertaken the development of the game rather seriously. A few rule changes have so improved the caliber of the sport that we venture to submit them here for the information and guidance of instructors who wish to raise the level of their soccer efficiency. These changes of method offer no magic formula but, when properly understood and patiently followed, they open new avenues of interest and create keen enthusiasm in a really good game which has lagged hopelessly in spite of its very obvious possibilities.

Illustration 1—Position of the center when about to head the ball.

National rules are of course followed in most part with the following changes: (1) field, 80-yard length, regulation width; (2) four six-minute quarters; (3) field goal counts two points; (4) penalty goal counts one point; (5) on corner kicks all players except goal keeper must remain outside of goal area until ball is kicked; (6) on-side rule not enforced; (7) goal keeper cannot be rushed when he has the ball in his possession; however, he must put it in play within five seconds—failure to do so gives opponent a corner kick; (8) shoes with buckles or other metal devices barred; (9) tie games remain as played; (10) league standings are determined by this method—win 2 points, tie 1 point each, and loss no points.

Illustration 2—The center contacting the ball with his head.

Illustration 3—The follow-through after the center has headed the ball.

IN this article, Virgil J. Noble explains why he believes soccer is a game well adapted to the recreational and developmental needs of boys of junior high school age. In addition, he gives a few suggestions for improving the technique of young players, which in turn increases interest in the game. Mr. Noble is Coach and Instructor in Physical Education at South Intermediate School, Saginaw, Michigan, where the soccer teams have won seven city championships and tied twice for the title since the school opened in 1923.

Heading, Trapping and Dribbling

The fundamentals of soccer are, of course, heading, trapping, dribbling, kicking and going around, and the methods used are too often of the slam bang variety which sends the ball zigzagging over the field with little attempt at direction. We are learning, however, that soccer ball is played with brain as well as brawn—that less smash and more science produce a better game.

Let us first consider the subject of heading. Illustration 1 shows the center's position when about to head the ball into the goal mouth. His body is sideways to the goal mouth and bent backward; his neck is fairly taut and his head slightly forward to better watch the ball. Illustration 2 shows his head contacting the ball sharply at a point well above the temple but *not* on *top* of the head. Illustration 3 shows the follow-through. This method of heading has both accuracy and direction.

If a halfback wishes to deflect an opponent's ball back in the direction from which it came, he allows it to hit the front and top of his head.

Front line players may take a fly ball on the top of the head and with a slight backward snap of the neck deflect it in the direction of the goal. This play may be used when two players are rushing the ball and time does not permit trapping or other movements. Being able to head the ball effectively is a marked asset, and the player who masters the trick has the jump on an opponent who waits for the ball to bounce before playing it.

Trapping the ball is accomplished by four different means—chest, stomach, legs, feet. Crisscross formations such as that shown in Diagram 1 are invaluable for practicing all of the above.

Diagram 1

Dribbling and short passes using the inside of the foot may also be executed from the formation illustrated in Diagram 1. Later two boys may pass the ball together down the field and then through. Still later other boys may be added until a full line has been formed.

Kicking

We have now reached that most important and most neglected of soccer ball fundamentals; i.e., the kick. Bruised and injured toes are rapidly reaching the vanishing point among players who have been taught the correct kick technique. There is a general idea that a kick is executed with the toes and so it may be, to be sure, but the kick which safeguards the foot and at the same time has accuracy of direction is made with the *instep,* not the toes.

A soccer ball kick, like a golf stroke, may be analyzed and found to contain three movements—Illustration 4, backswing; Illustration 5, contact; Illustration 6, follow-through. In a golf stroke the club must contact the ball at the very bottom of the arc of the swing in order to be most efficient. This is equally true of the soccer kick. In this case the left foot must be practically parallel with the ball when the right foot contacts it at the low point of the arc described in

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Illustration 4—The back-swing when the player is kicking the ball.

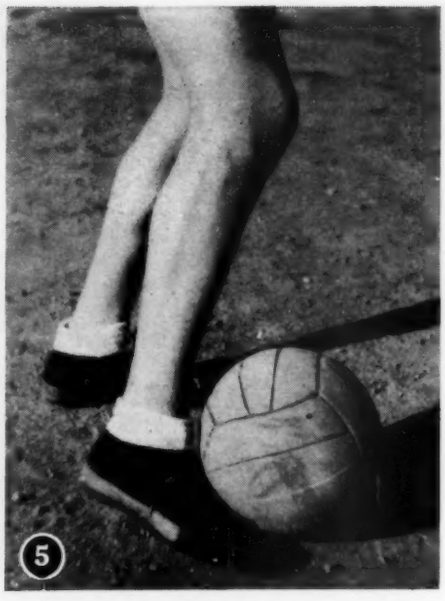

Illustration 5—The ball being contacted by the instep, not the toe, of the player's foot.

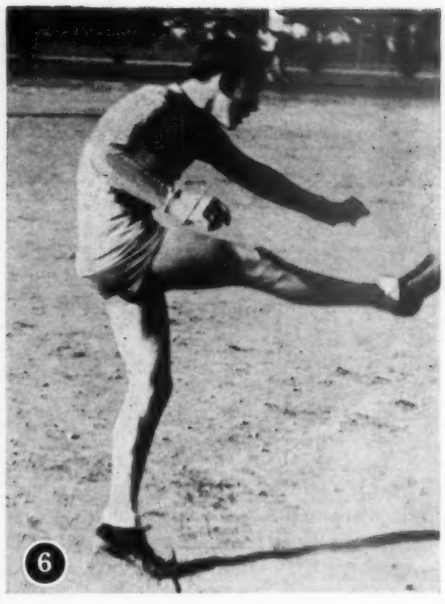

Illustration 6—The follow-through of the kick.

making the kick. The player must pay particular attention to the *pointing* position of the left foot, as this determines the direction the ball will travel.

Why Not Soccer?

Football, basketball, baseball, each in turn receive vast amounts of newspaper recognition. Reams of publicity pictures and stories are devoured by a public which has been educated to an appreciation of these sports. The soccer ball season runs concurrently with that of our national "panic"—football. The coach who would attempt to bring soccer ball into public favor needs inspiration.

If the publication of the results of our personal findings can furnish, to even a very small degree, such inspiration, we shall feel that we are rendering an essential service to bewildered soccer ball coaches everywhere, as well as to a wholesome game well adapted to the needs of junior high boys.

Training Hints for Football Candidates

By Simon Benson, Ph.D.

A PLAYER'S individual accomplishments—and consequently his value to the team—are, and must be, proportional to his physical fitness.

It matters little how many plays he knows. Unless he is physically fit to execute them, he is worthless. Yea! As far as the progress of the team is concerned, he is mere excess baggage.

While injuries cannot be wholly eliminated, they can to a large extent be reduced both in number and severity. Nowhere else is "an ounce of prevention" proportionally worth more than in the case of athletic injuries.

Remember, then, old injuries and weaknesses should be supported and protected by braces, tape and the like for *every* practice. All new injuries, including skin abrasions, scratches and other open wounds, should be given prompt care.

Injuries and Their Prevention

Special attention should be given to the feet, particularly early in the season. *Be sure you have properly fitted shoes.* Help to prevent tender and blistered feet by soaking them in the solution provided for that purpose. Do this daily after the shower. Also sprinkle foot powder in your football shoes.

Various solutions may be used for toughening the feet, such as those of formaldehyde, tannic acid or alum. Cold salt water (brine) may likewise be used. Rubbing the feet with alcohol will also tend to toughen the skin. Several different solutions were tried at the University of Chicago, but tincture of benzoin was adopted as the best for the purpose.

The tincture of benzoin solution should be kept in wide-mouth bottles (fruit jars) and covered when not in use to prevent evaporation of the fluid. A good sized flat pan may be placed next to the bottle. The solution may be poured into the pan and the entire foot soaked, but it is usually enough to paint the foot with a small brush or large cotton swab; the pan may then be used to catch the drippings. A hole may be punctured in the jar cover through which may extend the handle of the brush or the wooden stick used to hold the cotton swab.

After the first few days of practice, ankles must be taped. Unless there is a general weakness in the ankle, only a light, preventive taping need be applied. Remove it every Friday after practice. If it becomes loose during the week, have it reinforced. Special taping should be applied before every game.

AFTER several years of coaching in high school and college, Simon Benson went to the University of Chicago in 1925. While acting as trainer in the Athletic Department, he studied for his master's and doctor's degrees in the Department of Physiology. His research in the treatment of athletic injuries was widely recognized, and in 1934 he was awarded the Silver Medal of the American Congress of Physical Therapy. Dr. Benson's article on weight fluctuation of athletes, published last January in this magazine, attracted considerable attention among coaches and trainers.

Do not underestimate any injury or ailment. First be sure you are right; then go ahead. For example: While more work is one of the best treatments for "sore" muscles, it is *not* so for "torn" muscles. Make sure that your ailment is merely "sore" muscles before you apply "more work" as treatment. Abusing a fresh injury but briefly will often double the recovery period. Have the injury attended to first and become informed as to the advisability of continuing practice.

Every little bump and bruise should not incapacitate you, but it is also well to remember that only gods of mythology kick winning goals with broken legs.

In removing tape from feet and ankles, it is advisable to use benzene freely, not only to facilitate the removal of the tape, but also because of the apparently effective influence of the benzene in preventing "athlete's foot."

The training room is no "House of Magic." Sprains and the like cannot be cured over night. The procedure of the training room may not always check with your own fancy, but you may rest assured that it aims to give you the best treatment available for your ailment. This can be accomplished only with your fullest co-operation. Heed, therefore, all instructions and advice concerning your case. Use the training room for advice and treatment, but always bear in mind that it is not a place in which to practice oratory—nor a place in which to slumber. Avoid becoming a training room pest.

Diet

Since food is a necessary factor of life, it is well—especially for athletes who wish to be "alive"—to consider what and how to eat.

Quite often an individual is a law unto himself: "What is meat for one is poison for another." A good *general* rule to follow is to eat a great *variety* of foods—avoiding any food, or combination of foods, which from personal experience have proved disagreeable. In the case of athletes, fatty foods, as a rule, come in the latter class. Occasionally, even such "perfect food" as milk will cause gastric disturbances, but these can generally be corrected by sipping the milk slowly in place of gulping it down. Drink lots of milk—it is one of your best foods.

However, permission to "drink all the milk you want" is not a challenge for you to prove yourself the champion milk consumer of the squad. Overeating, like choking the motor of your car, decreases efficiency and multiplies the load.

Coffee? If you "don't feel right" without your customary cup, feel free to satisfy your craving—but avoid an excess.

Tobacco and strong drinks? Limited amounts of either may not "cut your life in half" but neither do they help to keep an athlete "alive." Draw your own conclusions.

Your boys who are taking English 17 AB can tell you what Shakespeare said about it. You know what a big name means to you, and how extra quick you are to check up on a fake masquerading under that name. And the moral of it all is that *a name is only a promise*, only a sales argument. It takes the real McCoy to come across after the promise is made and the sale is closed. It takes the genuine to *deliver*.

Genuine Kangaroo costs a few cents per square foot more than other leathers, and as a result, horsehide or cowhide is sometimes substituted for it in athletic shoes, and called "kangaroo horse," "kangaroo calf," or "kangaroo sides." But these *are not kangaroo*. And calling a leather kangaroo doesn't give it kangaroo's qualities. No leather but genuine Kangaroo is 17% stronger, weight for weight, than any other leather; is strong *and* soft and pliable; delivers all 3 factors so needed in athletic footwear: Foot Safety, featherlightness for Speed, and Foot Comfort.

So when you're okehing purchases of new shoes for your teams, remember that "kangaroo type" leathers are "kangaroo" in name only, that genuine Kangaroo alone means a shoe that will help them get the most out of their game.

KANGAROO

TANNED IN AMERICA

Start Kickers Young

By Edward J. Storey
Mamaroneck, New York, High School

Edward J. Storey

SOME Saturday afternoon, you will sit on the bench; it will be fourth down and your team must kick. You will be in suspense until the ball leaves your kicker's toe. You know that he is a fair booter, but he has blown a few kicks when the pressure is put on. Possibly you had no natural kicker, and just happened to find this fellow one day. Last year, you didn't bother much, because you had a born kicker who was good for about 60 yards at any time—or so you honestly believed. The deadly statistics, however, show that the average carry in the air of the best college kickers is only about 35 yards. Your kicker might have averaged a yard or two better, but he couldn't get much ahead of the average.

Let's get down to the game itself. Did your kicker get the kick away, or was it blocked? Yes, it was blocked, because a big tackle came charging through. The kicker was a little gun-shy, looked up to see the tackle and of course couldn't get the ball started.

Reasons for Starting Kickers Young

This situation is unnecessary. By one move, a lot of grief and worry may be saved. Start your kickers young. If you are a high school coach, get after them in the elementary school, provide incentives for constant kicking practice in the junior high, and, by the time they come to you in high school, you have an excellent, partly developed product to begin with in earnest.

No baseball player was ever developed in high school until he had thrown, hit and caught a ball some thousands of times in the back lots or the school playground. The same situation exists in football. I doubt if one school in a hundred offers an opportunity for one of these younger boys to kick a football. And if you want varsity kickers to keep you out of a hole, start them young.

Did you ever see a youngster try to handle his father's golf clubs? Did you ever see a sandlot kid trying to swing Babe Ruth's bat? There was something ridiculous about the picture, wasn't there?

Yet I have seen many physical educators trying to teach youngsters how to kick and forward pass with a regular varsity football. This was just as senseless as the other two examples.

The boy, properly to control the football, must be able to get his hand under it, and control the position and placing of the ball on his foot. This is impossible when small hands work with a regulation size and weight collegiate ball.

I think that I have found the solution here in Mamaroneck. We have developed a smaller junior official football of reasonable weight and size for the boys in the elementary and junior high schools. They can control it for kicking, and they can grasp it for passing.

After you provide the youngsters with a ball they can handle, give them a chance to develop their skill. The goal posts should be proportionately adjusted. We use a cross bar six feet high for the elementary school and eight feet for the junior high. You adjust the cross bar when teaching young boys how to high jump, yet in football some of you expect them to use the equipment of the mature young man.

A Game for Young Players

A boy has no fun simply in the possession of skill or aptitude unless he has some outlet for it. We provide this through our standardization of touch football, a kicking and passing game without any physical contact. Position on the field and scoring depend to a great extent on the strategic use of the foot. The game is a continuous kick-off and has no scrimmage line-up. We have eliminated this because research has shown that most injuries occur in the blocking and tackling within the scrimmage line zone. There is no blocking or tackling in our game.

After every kick-off the receiver may run, pass or kick the ball until he is tagged. This develops judgment; the boys learn to kick on the run and pass while in motion. As soon as the ball is dead, the team in possession must kick off either by drop-kick or placement. Since we have given the boys a game of skill, goal posts and a ball to fit their physical requirements, they are able to play football on the sandlot or playground just as they have always played baseball.

The problem of providing a recreative, safe and activity-satisfying game in the fall for the younger boys may safely be called solved by touch football. This game will cause no injuries. With about a thousand of my boys playing it regularly for the past nine years during the football season, there has not been even a minor casualty.

The chief difficulty at the start of teaching is the elimination of the scrimmage line idea. There are some physical educators who still cling to it in this game, just as some cling to dull five-minute drills. There is just as much sense in having a scrimmage line in touch football as there would be in soccer. It simply doesn't belong there.

Teaching Kicking Fundamentals

For the fundamentals of teaching, the instructor should go to *Kicking the American Football*, by LeRoy N. Mills. I am proud to be one of Mr. Mills' former pupils, for I believe that he knows more about kicking a football than anyone else in America. He has made an analytical appraisal of strategic elements, and his summing up is the result of years of compilation and study. He is the only man who has dissected the art of kicking, so to speak. For instance, he first called attention to the now well-known fact that kicks missed over the left goal posts are usually the fault of right-footed kickers.

If one plans to teach younger boys to play touch football, it is the best plan to make a regular course of study out of it, not leaving one subject until it is as nearly perfect in the minds and action of the pupils as possible. Punting comes first. The youngster should learn instinctively to hold the ball with one hand, the right, with the middle finger on the bottom seam, and the point just resting on the left hand. This, of course, is for right-footed kickers.

As the right foot goes forward, he should lay the ball down on the foot and kick, keeping the left foot flat on the ground. Having the left foot flat assures a stable balance, which is most necessary. This should be practiced thoroughly, while the coach pays special attention to the proper placement of the fingers which hold the ball. A very important fundamental is that of laying the ball on the foot, and keeping the right elbow close to the side while doing it.

A GRADUATE of the University of New Hampshire, Edward J. Storey has for the past ten years been Director of Health and Physical Education at Mamaroneck, New York, High School, where he has coached a number of winning football teams.

Drop-kicking involves the same fundamentals of balance, but the ball is held differently. For this kick, the ball should be held in both hands, with the middle fingers and the thumbs controlling the ball; the former are on the ball just below the center, so that it will tend to tip back toward the kicker.

Results of Early Training

This instruction may sound complicated, but a few trials will prove otherwise. In my school days, I was never taught anything about kicking except to hold the laces to the side to get a spiral. There is no substitute for practice of fundamentals. It is foolish to follow the old coaching tradition, and sit back and wait for a "natural" to come along. I have had old time coaches watch some of my kickers, and suddenly point a knowing finger and say, "There is a natural." All I can do is hold back a laugh and "remember the time when—"

One of my boys, now on the varsity of a great Eastern university, told me eight years ago that I was wasting my time on him, and that he wanted to quit then and there. He could kick barely 25 yards accurately. In his senior year, he won our big game by putting the ball out of bounds within the 5-yard line three times in the first quarter. The opposing kicker blew up after the third attempt to kick the ball away from the goal line. If kickers are not trained and assured, the most skillful by nature may go up in the air at any critical time, or even after a few setbacks.

I doubt if any of my junior kickers, who are not due for college for eight years yet, will feel any tension on the advanced gridirons. That's because I'm starting them young.

A Comprehensive Sandlot Football Program

(Continued from page 35)

per cent had high school experience in football. On the other hand, 56 per cent were without any football coaching or playing background, either at school or on the sandlots. The formation of the Conference Coaching School is intended to raise the standards of sandlot coaching.

Of the 144 Warner Conference teams last fall, 56 per cent were without proper equipment. Shoulder pads were considered an unheard of luxury; football helmets were considered worn only by "softies." It took a great amount of pleading to convince the boys that full football regalia did not detract from their efficiency or character. Only 16 per cent of the teams had equipment comparable to that of the average high school squad.

Injuries

What percentage of football injuries were due to faulty equipment is conjec-

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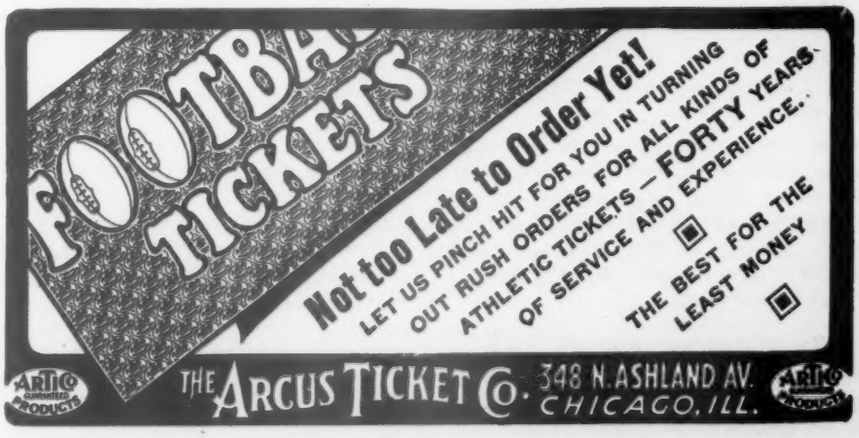
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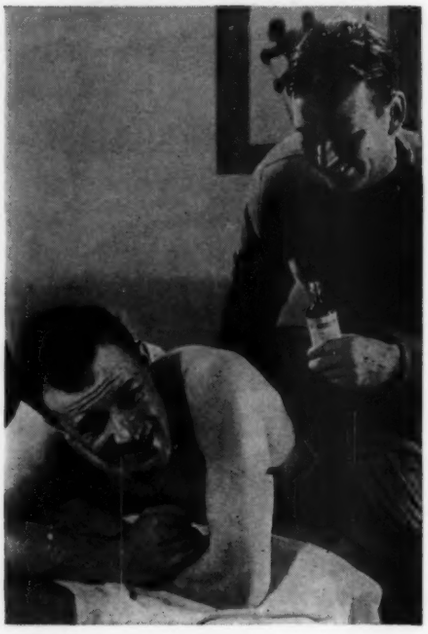

WHILE coaching his team, H. P.* of Detroit, accidentally sprained his back and suffered acute pain.

Ordinarily a man would be laid up for days. But not H. P. A great user of Absorbine Jr. to relieve bruises, pain and strain for his athletes, he had his own medicine rubbed on his back. Absorbine Jr. soon had him feeling fit and limber.

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**Based on actual letter in our files*

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Relieves sore muscles, bruises, muscular aches, sprains, Athlete's Foot, sleeplessness

tural. Other conditions have to be considered in arriving at these causes. Poor playing fields, improper coaching, and lack of responsible supervision and authority also helped raise the injury totals.

The following injuries were reported during the 1935 season by Conference teams:

Ribs	19 cases
Ankles and feet	18 cases
Nose	17 cases
Eyes	14 cases
Hands and wrists	13 cases
Knees	9 cases
Shoulders	8 cases
Fractures	7 cases
Elbows	4 cases
Kidney	4 cases
Neck lesions	3 cases
Fingers	3 cases
Concussions	2 cases
Arms	2 cases
Thighs	2 cases
Stomach	2 cases
Pelvis	1 case
Groin	1 case
Spine	1 case
Heart ailment	1 case
	131 cases

In all, 19 per cent of these injuries were of a serious nature, the player being incapacitated two or more weeks; 25 per cent were treated by a physician or sent to a hospital; while 75 per cent found treatment in home remedies, usually upon advice of the corner druggist, known as "Doc" to the boys and their families.

The approximate cost of these treatments totaled over $1,000.00. Forty-eight of them cost below $1.00 a treatment; 33 from $1.00 to $5.00; 24 from $5.00 to $10.00; 16 from $10.00 to $25.00; and 10 from $25.00 to $50.00 a case.

There were but eight teams carrying a trainer or a doctor to their games. Eighty-nine clubs did not possess even a properly filled medical kit. A bottle of iodine and one of smelling salts was all that seemed necessary to the boys. During many games last season the Conference referees took time out to treat the more seriously injured.

The prevention and care of the injuries offered a problem which the Conference could not evade. It organized a staff of volunteer physicians in different sections of the city who cared for all needy cases. The Lions Clubs of Philadelphia were contacted and their support was secured in the form of a medical fund. X-rays and hospital treatment now became available to many boys who would otherwise have had to depend on a bottle of iodine or the advice of the corner druggist. All this work involved considerable detail as well as the employment of a medical investigator. His duty was to cover all applications for free treatment to ascertain that the applicant was a Conference member, that he was injured in a Conference game and that his family could not afford to pay the bill.

Outside Co-operation

The co-operation received from schools and colleges has been very gratifying. Championship games were played at the Frankford High School Stadium, the finest in the city. Pennsylvania and Temple universities permitted the use of their buildings for meetings and rallies. Four local colleges gave Conference members complimentary tickets to one of their football games. Temple's Department of Physical Education encouraged its students to become Conference referees and officials. This latter contribution played an important role in the success of the Conference program.

The referees are the connecting link between the Conference and its teams. After each game the referees fill out a report which grades the teams according to sportsmanship, co-operation, conduct of spectators, size of players, their equipment and the like. To secure this material any other way would be a physical impossibility for the Conference staff, and to leave the matter to team managers and coaches would be a waste of time and paper. Sandlot teams have a peculiar flair for falsifying facts, especially if the team loses. Then all officials are "crooks," the opponents are "poor sports," and other alibis are advanced to relieve the sting of defeat.

Following week-end games, the team representatives meet for Monday evening "bull sessions," at which time all disputes are brought to the floor for discussion. Some of the arguments become so heated that neither the Board of Judges nor the Conference staff can render a decision pleasing to all parties concerned. In such a case the matter is presented to a leading city jurist or lawyer, who is a member of the Conference's Executive Committee, and his fatherly interest and opinion soon satisfy both contestants.

The conference program has received the generous co-operation of the Philadelphia newspapers. However, space forbade the printing of complete résumés of each game, except during the play-off series, when double column publicity was secured. Therefore, to keep a lively interest in events the Conference published a weekly News Bulletin during the fall season. Material covered consisted of scores of all games, team standings, player statistics, and other items of the football variety that kept members' interest in the Conference at white heat.

The Conference is directed by an Executive Committee composed of twenty-six leading Philadelphia business and professional men, with Paul W. Gibbons, President of the Philadelphia Tennis Association, as chairman. The athletic program is in the hands of an Advisory Committee, composed of athletic coaches and directors of the city's leading schools and colleges. Glenn S. "Pop" Warner is chairman of

this group. President of the Conference is Dr. Herbert J. Tily, prominent executive head of the city's leading department store. Both George H. Earle, Governor of the Commonwealth of Pennsylvania, and S. Davis Wilson, Mayor of Philadelphia, are directors of the "Pop" Warner Football Conference.

Further Possibilities

Although the Conference does not sponsor the formation of boys' clubs as one of its main activities, it does, on the other hand, endorse the boys' club movement. It has encouraged, both with advice and energy, the formation of six new boys' clubs out of Conference football teams whose members previously met on street corners or in the homes of the players. The Conference only recently joined the Sandlot Sports Union of America, a national organization devoted to the cause of the sandlotter and of boys' club athletic programs.

As yet the Conference has not entered into the organization of baseball and other sandlot sports to the extent it has with football. However, it arranges games for teams, free of charge, but beyond that has kept out of these sports.

The football program is sufficient material for the present staff and personnel, and, until this program is well developed, the addition of other sports will have to mark time. The Conference budget just about clears expenses by the end of the football season. When the opportunity presents itself, the organization will certainly extend its good work to include other sandlot sports. Until that time, the Conference must devote itself to the supervision of football, which proved a much more difficult proposition than the sponsors originally estimated. However, there is not one of them today who does not feel that the time and money spent on this program has not been placed in a worthwhile cause. Many Philadelphians also estimate that the "Pop" Warner Football Conference has been a smart piece of publicity for the city.

The Conference offers its plan of organization to any person or city in the country.

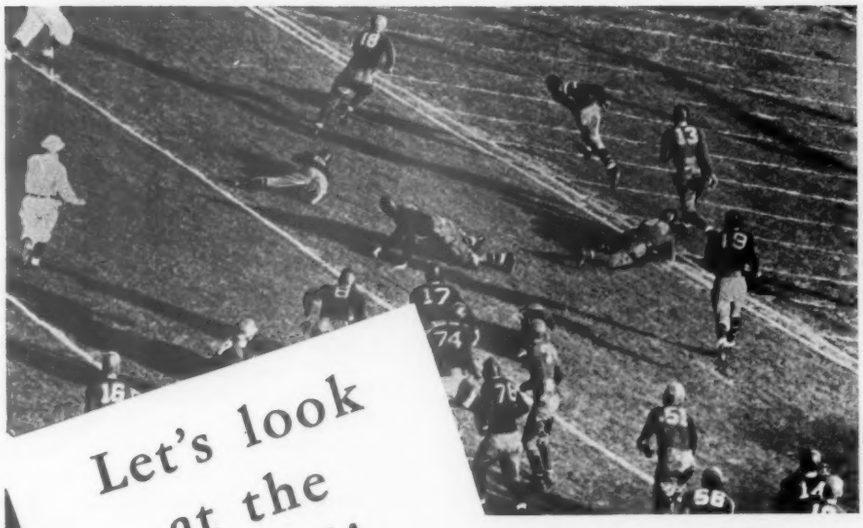
Principles and Methods in an Intramural Sports Program

(Continued from page 26)

the principles and methods that have been of help in the program at the University of California, in the hope that some ideas may be presented which will have value in application to other intramural programs.

Program Adapted to Students

First and fundamental is the principle that it is unwise to attempt to adapt the students to an intramural program. The



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program must be adapted to the students. This should be self-evident. However, to follow it entails a considerable amount of experimentation. There are those who say, "We used this plan back at my alma mater. It worked there and will work here." Perhaps the plan will work, but something else may work better. The students at "alma mater" were in a different community. There attitude towards fraternities may have been different and the weather and gymnasium facilities not the same.

At the University of California there are many fraternity men, most of the houses being smaller than those at other universities. But there are many more men who do not belong to fraternities. Many of these men commute from San Francisco or Oakland and eat their lunches on the campus. The total enrollment of men students is so large that no interest can be maintained in interclass competition. The California weather permits outdoor sports all the year around. For instance, tennis competition never ceases. Thus the systems used at Colgate or Michigan could not be transplanted efficiently to the Berkeley campus. It was, however, necessary to get ideas from programs elsewhere and to adapt them to existing conditions.

Wide Variety of Sports

A second principle is the necessity of offering a wide variety of sports in order to draw greater numbers of students into activity. Organizations and individuals may then center their activity in the sports of their particular interest. Plans are under way to offer competition in bowling, horseshoe pitching, archery and yachting as soon as facilities and supervising time permit. Small groups of students are interested in only one sport. Opportunity for competition should be given them on ladders and in round-robin tournaments.

This points to a third principle, the need for offering in some sports an opportunity for continuous competition. Many students play basketball, water polo or handball all the year through. It is only a source of unpleasantness to such students if we attempt to persuade them to compete in other sports. As long as they desire to play basketball, there should be a basketball league in which they can play. This demand has been met by establishing a form of continuous league competition in basketball, water polo, soccer and baseball and a ladder system in sports adapted to individual competition.

Certain sports require more supervision than others. Such sports are water polo and soccer. Men competing in these sports need preliminary training and can be more adequately handled on the continuous league basis than in the customary, loosely organized fraternity and non-fraternity system. American football, if used at all in intramurals, should be organized in this fashion.

So much for the general principles underlying the organization. Now for some of the methods used in making the program operate successfully!

Student Managers

One of the most important elements of the intramural program is that student managers should direct and control the activity. This helps to make the program fit the desires of the students instead of fitting the students to the program. Although desirable in theory, this method has not always worked satisfactorily. It is difficult to get a large enough turnout of managers, who will work without pay, to handle even the fraternity-organizational part of the program.

The present system is to use student managers to direct the activities in the fraternity-organizational leagues aided by other assistants. These managers are junior students selected at the beginning of the fall semester and continuing until the end of the spring semester under the control of a senior manager, who is chosen from the group of juniors of the preceding year. The only tangible *quid pro quo* is the senior award, a big C. The rest of the boys must be content with the satisfaction of performing a service and with the opportunity for enlarging their circle of acquaintances through working with the various campus groups.

It would be impossible to work with some seventy campus fraternity and other organizations without selecting a responsible person in each group through whom contests might be scheduled and announcements made. The systems of continuous leagues and ladders may be handled very easily through clerical procedure, as has been explained in the previous article mentioned. But organizations for which intramurals are only a pastime cannot be compelled to follow a set formula of procedure. By selecting for a manager a man from each organization who takes a special interest in the program, and dealing only with that man, scheduling, announcing sign-ups and controlling eligibility of players become only a matter of conversation between the members of the intramural staff and the various team managers.

It is well to have the organization appoint the manager. But when, in the stage of development now existing on the campus of the University of California, many organizations have not attained the peak of interest, it is necessary to make a very careful selection. Through this man interest may be created.

These managers are called into the intramural office at the earliest moment. Each member of the staff becomes personally acquainted with the managers from the various organizations. Name and telephone number of the manager are entered on his team's record card, the program for the year is outlined to him and some discussion takes place concerning his or-

ganization's activity during the past year and the rules of eligibility. An attempt is made to present the intramural office to the various team managers as a place they should frequent during some of their leisure time. These men are a most necessary factor in the development of interest and organization.

Following out the idea of personal contact, we find it well not to limit the efforts along that line to team managers. Intramural sports as a system will be joined by many individuals who have a strong desire for competition but who are not proficient enough to get into the intercollegiate circle. However, new students will be slow to react on their own volition. A small orientation intramural program for the more than 2,000 new students enrolling every fall semester has been attempted. This was suggested by a plan which is used at the University of Michigan and is no doubt in vogue at many other colleges and universities. The new students come from numerous different localities and are too little known by one another to be expected to derive much from team competition in the orientation program. Team competition was tried last year but will be discarded for a more intensive program of individual sports: tennis, handball, table tennis and the like. The idea is to introduce the new students to the program; while signing them up for orientation tournaments or encouraging them to sign up, the staff members are able to explain to these newcomers the various sports and systems of competition open to them during the coming semester.

Publicity

Personal contact with team managers and new students is, naturally, a form of publicity; perhaps the most satisfactory and reliable type. This phase of promotion must, however, be aided by the campus press, the intramural sports booklet containing rules and organization procedure and through poster advertising.

On the University of California campus, the *Daily Californian* has been instrumental in creating interest in the development of the program and in maintaining the interest gained. Aside from the occasional editorial comment and promotional stories, three methods of handling daily publicity have been developed in this campus publication. First is the "intramural box." This space contains the list of intramural games to be played during the day. Nonfraternity organizations, whose members usually cannot be reached by telephone, are often forced to rely on this method of notification. It is a reminder to all competitors and serves to announce to the campus what is going on in intramural competition. Second, the highlights in the various games and tournaments, including names of outstanding performers, are cleverly written up in a column called the "Intramural Parade." Of course, the sports page is congested with items on in-

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tercollegiate competition which take precedence over intramural stories. By having the column just mentioned, a daily picture of intramural activity may be presented without using too much space. But the column is not the only medium. To announce the results of the more important and championship contests a third type, the regular sports news story, is used. This sets the program before the campus in the most satisfactory manner.

It is necessary that those interested in the intramural program have in some compact form the rules and procedure in effect in conducting activity. With this in mind a booklet on intramural sports has been published at the University of California. A considerable sum was spent on this book in an effort to present something more attractive than the customary pocket sized "intramural sports Bible." These booklets contain everything a contestant needs to know in addition to some publicity material and numerous activity pictures. The latter were included in order that the book might be used in spreading information concerning the program to the high schools and junior colleges throughout California.

The need for posters in the promotion of intramural activity has made an artist a very necessary member of the staff. In fact, the entire program has been depicted on various posters which are alternated on various bulletin boards. They are in color with sports figures, usually in cartoon style, and announce the essential rules and procedure of the various sports and systems. A large blackboard in the locker room is used to advantage as a medium for portrayal of current sports in cartoon fashion.

Double-Elimination Tournament

A discussion of the methods used in developing the intramural sports program would not be complete without including something about the double-elimination tournament, the use of a point system in measuring total activity, the trophy policy and the intramural sports carnival. Because these items are susceptible to various methods of application and because they have been found to be of large importance in the development of the program at the University of California, the following brief discussion of each of them is offered.

The double-elimination tournament, which we use in all fraternity and non-fraternity competition, with the exceptions of baseball, American football, track, swimming and golf, is deserving of some brief comment. Its advantage over the single-elimination plan is evident. Often a team fails to appear for a game because of a misunderstanding of the schedule or some conflicting interests; or because the boys may have an off day. The team may still desire to continue competition. Several instances have occurred this year of a team's being defeated in the first round of the tournament and coming through to win the league and even the university championship. The continuous league competition must necessarily be arranged on the round-robin basis or a form thereof, but the double-elimination tournament is far superior to the round-robin system in dealing with fraternities and other campus organizations. The department discovered that after a team has received two defeats its members lose interest and, in the majority of cases, begin defaulting their scheduled games. This ruins the morale of the whole program if the round-robin is used. The round-robin permits games to be scheduled further in advance, but it also causes a good deal of confusion when games are postponed. In addition to other advantages, the tournament plan permits each team to see more readily its standing in the league without considerable clerical work.

The Point System

The use of points in measuring the competitive endeavor of each team, thereby showing how each organization compares with the other campus groups, is most desirable. It does not matter what point system is used so long as all competition between campus organizations is recognized. At the University of California the campus is divided into two leagues, the fraternity league and the non-fraternity league. (It may be well to remind the reader that this is separate from the continuous league system referred to above.) These leagues are called the American League and the National League in order to avoid the term "non-fraternity," sometimes considered undesirable. The runners-up and winners of each league in the various sports gain a fixed number of points, depending on the importance and interest in the sport contested. Additional points are given for winning the play-off between the two leagues for the championship of the University. All other teams competing gain points according to the number of games played. After a team has been once defeated it is awarded only half the points it would have gained on the undefeated bracket. In sports where the double-elimination tournament is not used, the points are allotted according to the final rankings of the teams competing.

These points are recorded daily on two charts in the intramural office by filling in a column after each team's name with red pencil, thermometer fashion. This enables the competitors always to see how they compare with the rest of the campus. Victory trophies are awarded the teams amassing the largest number of points during the school year. Additional trophies may be given to create interest among certain groups. For instance, a special Engineer's Victory Trophy is offered to the engineering college team earning the most points in competition in the non-fraternity league. The smaller boarding house teams

may be offered special inducement in the same fashion.

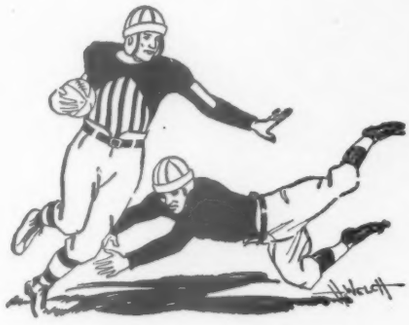
Trophies

Going now to a discussion of trophies in general, we find there is no question that an attractive set of cups and plaques is a necessary part of any intramural program. They are a publicity medium and serve as a goal for competition. The development of the program at the University of California has been handicapped because of the prohibitive cost necessary to supply a complete set of awards to so many sports and leagues. We have been fairly successful in adequately supplying the fraternity and non-fraternity leagues. Fraternities make especially good use of their trophies. The plan is to give the winning team of each league in the various sports a rotating award, cup or plaque, which it may keep for one year. These rotating trophies gain value as time goes on because they carry a chronological record of past activity. However, each fraternity or other organization desires to build a permanent trophy collection. To fulfill this desire the winner of the University Championship in each sport is given a cup which remains permanently with the organization. It would also be desirable to give some sort of trophy to the runner-up in each tournament, though this has not been attempted to date.

Teams organized only for intramural competition have no place to put team trophies, and such awards are not made in continuous league competition. Here the squad members of the winning teams are awarded intramural sports belt buckles, each with a panel figure of the sport played and the date. These buckles are of bronze and may be obtained for a reasonable price. Buckles are also used as awards for winners in individual sports. In addition, several plaques in the gymnasium trophy case provide space on which the names of the champions in the various individual sports for the current semester may be engraved.

The Intramural Sports Carnival

There remains only one other item to discuss, the annual intramural sports carnival. Similar shows are staged at many universities and colleges. This is a very important element of the program at the University of California for two reasons: first, it focuses the attention of the entire campus on the intramural program for one day during the year and, second, the admission charge collected from the students and the public provides money for the purchasing of trophies and the defraying of other expenses. The carnival is planned to include all the championship contests in the various tournaments started during the fall semester. The program also includes various individual tournaments: i. e., basket shooting, football passing and punting and table tennis. As a feature, interclass



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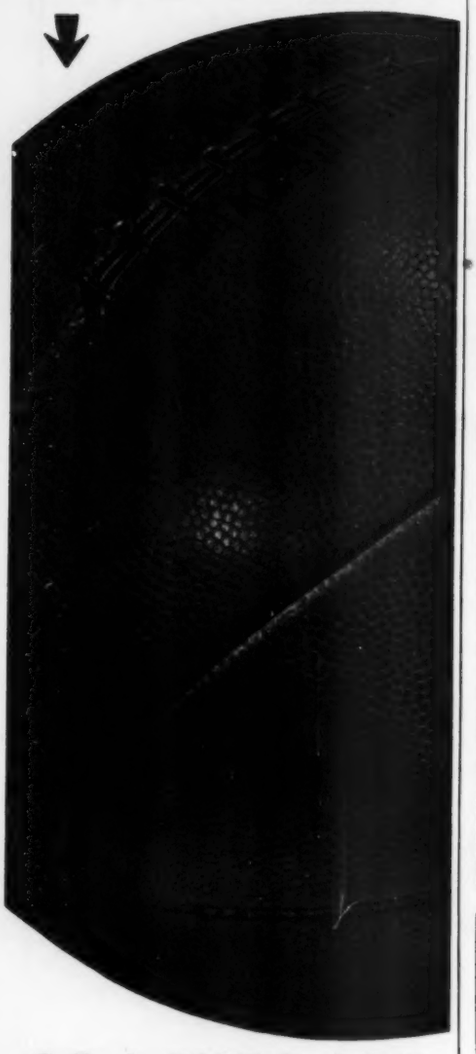

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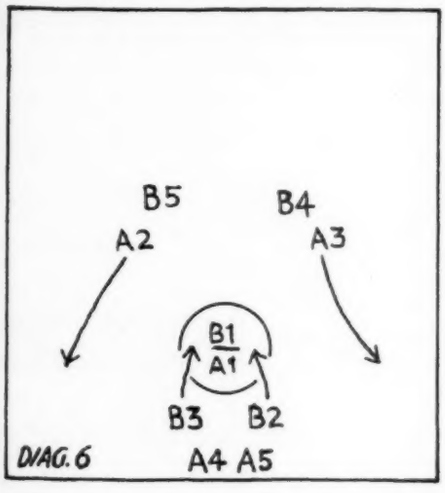
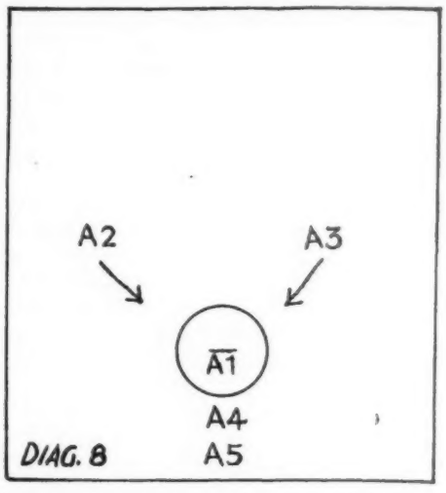
Center Jump Formations Under the 1936-37 Basketball Code

(Continued from page 24)

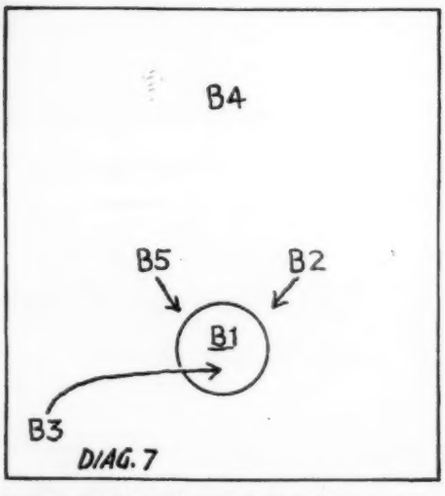
should line up as in Diagram 6. Defensive forwards B2 and B3 drive down on either side of the center circle in an attempt to steal the center tip, which the A team center controls. This will put all five players of team B in very good defensive position. Now what can team A do to get the tip? Wide tips here to either A2 or A3 on signal are very safe.



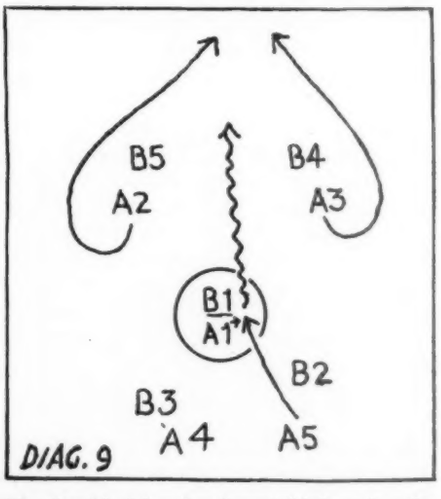
DIAG. 6



DIAG. 8



DIAG. 7



DIAG. 9

I have seen a team that did not have a tall center get the tip at center by the play shown in Diagram 7. The B team line-up illustrated here is used when team A has been tipping back to a tall guard most of the time; that is, team A has lined up as shown in Diagram 8 and A1 has continually tipped to the tall guard, A4.

Now in Diagram 7, B3 times his run-in hard and high to steal or deflect the ball from A4. A1 should now tip the ball all the way back to A5.

Another play that team A, the team controlling the tip, can use at times is the so-called "crash" play. Naturally the type of defensive play that the opponents use would determine whether this play could be used or not.

In Diagram 9, either guard, A4 or A5, may drive through on signal from center. He should drive hard and high, take the tip and dribble down the middle of the floor, going all the way, if the B team guards stay spread. Both forwards, A2 and A3, turn to the sides of the court and then cut for the goal. Should either guard leave his forward, A2 or A3, the offensive guard, A4 or A5, may pass to the open man as he cuts for the goal.

The formations described above are the ones that seem most likely to be used at the beginning of the 1936-37 basketball year. As the season advances, and coaches and players discover how the new center rule works in practice and actual games, other formations will probably develop.

Maintaining the Athletic Program on a Reduced Budget

By William J. Bingham
Harvard University

MANY colleges and universities have carried on their athletic and physical education programs during times of reduced income without seriously hampering their effectiveness. Among the universities which have met the situation courageously and intelligently is Harvard University. In his annual report for the academic year 1934-35, William J. Bingham outlines the measures taken by Harvard to carry on its athletic program in spite of curtailed income. Extracts from this report are published here. Mr. Bingham is Chairman of the Committee on the Regulation of Athletic Sports and Director of Athletics at Harvard.

THE most significant accomplishment of the Athletic Committee during the past year was the balancing of its budget. As pointed out in my report last year, we are almost entirely dependent on football receipts to meet the expenses of our athletic program. In four years our football income has declined to the point it had reached fifteen years ago, and yet, in spite of retrenchments made necessary by this continuous lack of income, we have been able to maintain our athletic activities at a point tremendously in advance of what they were fifteen years ago. The administration has been conscious of our struggle to reduce expenses and at the same time to maintain a broad schedule of athletic activity. With our promise to continue this economy, the Corporation announced in February that it would approve of an "Endowment for the Maintenance of Athletic Sports," and would accept contributions toward such a fund.

Whenever the athletic endowment was previously suggested, it was at a time when football receipts were mounting steadily toward an unforeseen limit. Nobody then worried about anything as improbable as a depression. Thus, our surpluses were used to expand our program and our facilities.

Frankly, we feel no regret for this procedure, for we contend we did not go too far. We invested in capital which has paid and will continue to pay dividends to our undergraduates. Even intercollegiate athletics are now not limited to a few in any sport on our program, and our informal athletic activity reaches nearly every undergraduate at Harvard. Soldiers Field is not now two-thirds swamp, which it was in 1920; the activity in the boathouses has quadrupled since the World War; and our indoor facilities are three times as great as they were fifteen years ago. Obviously these increased facilities meant more personnel, and our real problem during these past few years has been to run a greatly enlarged plant with receipts no greater than we had in 1920. With the closing of only one building and withdrawing financial support from only one minor sport this has been accomplished.

Required Exercise

In connection with athletic activity the question is sometimes raised to what extent the college should be responsible for recreation and exercise. Are we doing too much? Are our facilities too extensive? Is the instruction too technical?

The faculty long ago voted that exercise for freshmen is a requirement. Little has been accomplished if a boy stops playing games after his freshman year, and if we judge by the amount of time a boy demands for other extra-curricular pursuits I do not think that we have overdone intercollegiate athletics. In football we play but eight games, and practice less than 100 hours during the fall. In baseball we play more games, but only because games take the place of practice in this sport. In hockey we practice less than 100 hours, and play a dozen games. To be sure some boys play in more than one sport, but they are the exception, and with a large program it means that we are reaching more boys, furnishing them with recreational activity, and not in the least interfering with their intellectual pursuits.

William J. Bingham

In order not to interrupt classroom activities our program must be planned to allow nearly all boys to exercise and play between two and six o'clock in the afternoon. This means extensive facilities. It means many coaches. A coach is a teacher, and he must be a good teacher who can show others by example and explanation how to improve their technique in a particular sport. Halfhearted efforts and half-prepared assignments will not satisfy a good athletic teacher. His pupils and his teams cannot win contests by such tactics. Consequently his teaching methods must be comprehensive, thorough and forceful.

The three questions are answered when we agree to what extent we want the entire undergraduate body to exercise. We feel our purpose is educational in pointing out to a boy that exercise is beneficial and necessary to a healthy life, which in turn makes him better fitted to do his college work.

As athletic administrators we must constantly guard against the return of any discarded evils or the encroachment of new ones. We can retain a place in undergraduate life for intercollegiate athletics if we never lose sight of the fact that our undergraduates are primarily students who incidentally are taking part in intercollegiate contests, rather than athletes who incidentally are going to college.

During the past few years there has been a small group which has advocated a curtailed freshman exercise requirement for boys who are working their way through college. When the faculty voted physical exercise a requirement, it was thinking most of all of the studious type of boy who preferred books to exercise. Many boys of this type are working their way through Harvard today, and they have become familiar with games during their freshman year which they have continued to play during their upperclass years. Partial evidence of this is to be found in the success of House athletics. The requirement is not more than three hours a week, and is sufficiently elastic to fit into the program of every freshman. Boys working their way are entitled to this small amount of recreational exercise. Although of course unnecessary, it would be far more logical to ease the academic require-

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ment for such boys than to excuse them from physical training.

Minor Sports

Earlier in this report I have mentioned that we balanced our budget with the closing of but one building and withdrawing financial assistance from one minor sport. The building closed was the Hemenway Gymnasium. The sport which has operated "on its own" during the past two years is polo. Because of the nature of the sport, the impossibility of the Athletic Association ever owning polo ponies and the comparatively few men engaged in the game, we have not felt that our program would be materially affected without polo. We are agreed it is a fine game—in fact one of the very best; but it is far too expensive to be included in an intercollegiate program.

To reduce expenses further during the next few years our Athletic Committee has been asked, and we have agreed, to withdraw much financial support from seven minor sports, viz., golf, lacrosse, soccer, fencing, wrestling, boxing and cross-country running. Obviously no department wants its activities curtailed, and the Athletic Committee will make every effort to keep these seven sports on our program. If we drop them altogether many boys will be deprived of recreational exercise, for unfortunately they will not drift into other sports. The boy who likes soccer, for example, may thoroughly dislike football, even though both have varying degrees of physical contact. I cannot conceive of a fencer being as enthusiastic about any other sports as he is about fencing. The wrestler and the boxer have no comparable substitute sports during the winter season, and lacrosse has ever been peculiarly lacrosse.

Since we have no college golf course, we hope to continue golf with modest financial assistance, and allow matches to be played in the vicinity of Cambridge. Cross-country can be absorbed by track with little added expense. We can continue boxing with diminished expense, and the same is true of lacrosse if we play games only with New England colleges and have one of our football coaches give part of his time to lacrosse.

It would be an obvious tragedy to disappoint more than 100 boys who are playing soccer this autumn. Their budget can be curtailed to a point which we hope will be acceptable to the Budget Administrator. Our Committee is worried about wrestling and fencing. Both are excellent sports. The former might be saved by graduate coaching, but no graduate coach is capable of instructing fencing on a part time basis. Fencing requires patient work and poise. No coach on our entire staff works more diligently than Monsieur Renè Peroy. When it is pointed out that comparatively few boys report for fencing, the answer is that Peroy should not be expected

to work ten hours a day, and there are days when he is on the "strip" morning, afternoon and evening. Fencing is also a sport which one can continue late in life. It is not uncommon to find men fencing who are in the sixties. We must find some way to keep this sport, which has been on our program for more than half a century.

During the past year our intercollegiate teams engaged in 374 contests, winning 244, losing 122 and tying 8. Our record against Yale was not impressive. We lost in four out of five of the major sports, although third games were necessary to decide both the hockey and baseball series.

Football

After many years of graduate coaching in football, the Athletic Committee engaged Richard C. Harlow, Pennsylvania State '12, to coach our football squads. Harvard graduates need not be anxious that any of our traditions or our athletic ideals will be sacrificed with a non-graduate coach. Practically all of the other sports on our program are coached by graduates from other colleges. These coaches cooperate to foster a high grade sportsmanship and an adherence to our rules and regulations.

One of our established football customs which now seems most vitally in need of a change is that of restricting the start of football practice to a definite date of September 15th each year. This custom began in 1922 when the Presidents of Harvard and Yale and Princeton adopted a joint agreement regarding athletic policies and practices. While some of the financial rules and the restrictions referring to transfer students now seem unnecessarily severe, one must examine the unwholesome practices which existed a dozen years ago to learn the necessity for this presidential move. Obviously, however, conditions change, and certain sections of the Presidents' Agreement should be studied with a view to adjusting them to modern conditions.

Since 1923 football practice under this agreement has been prohibited before September 15th. This specific date was selected because at that time the Western Conference, "The Big Ten," had adopted a similar rule. It was the hope of the Presidents that other colleges would follow the example of the Big Ten, Harvard, Yale and Princeton. Unfortunately this has not been the case, and even the Big Ten have moved ahead their football starting date to September 10th.

For years our Medical Department has recommended earlier practice for the football squad, and naturally the uppermost thought in the doctor's mind has been his belief that the boys themselves would be less apt to be injured if they had a longer preliminary practice.

Shortening our schedule is not the answer, for game experience is just as important as preliminary practice. Another fac-

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tor which should be noted is that under the present arrangement practice starts on a fixed date, and the final game with Yale is played on a veritable date between November 19th and 25th.

From many observations and from repeated recommendations over a period of years of our Medical Department, I have now come definitely to the conclusion that it is not fair to our teams to ask them to meet Dartmouth, West Point, Brown, Holy Cross and others which practice earlier than Harvard. After most earnest consideration, I recommend that we limit the football season to not more than eight games (a practice which has been in effect for thirteen years); and the entire time devoted to football in the fall, including medical examinations, issuing football equipment, practicing and playing games, shall not exceed eleven weeks. On this basis practice this past fall would have begun on September 9th. This proposed change would enable us to have four full weeks of preparation before the opening game, and is in line with the Big Ten and with all except two colleges we meet in competition.

An endowment for the maintenance of athletic sports may appear remote, but we feel it is a move in the right direction, and we earnestly hope to see the fulfillment of the idea before the next depression.

Correlation Between Mechanical and Stop-Watch Timing

(Continued from page 16)

more nearly like the stop-watch times. Where tenths were split on the watch, the longer time was assigned.

In order to make the races as real as possible, at least three sprinters ran in each race, the one striking the tape first being timed.

The differences between stop-watch timing and mechanical timing in this experiment are materially less than those reported by Cureton and Coe. They are, however, comparable to the differences reported by Fetter. Evidently the former investigators were employing inexperienced timers.

In every race except one, the stop-watch times were shorter than mechanically obtained times. If the reaction time to the flash of the pistol was the same as that to the sprinter breaking the tape, then the human element should cancel out. However, this is not the case. The gain in time seems to be at the tape. Our investigations in progress are supporting this idea which has been stated by others.

Since it is generally agreed that, for the most part, practically all races must be timed by the use of the stop-watch, the problem becomes one of improving stop-watch timing. In a future report from this laboratory a scheme will be suggested for such an improvement in technique.

Although trained timers are subject to an error in using the stop-watch which is significant, it is apparently not so serious as we are led to believe. In the great majority of cases the error is .1 second or less.

It should be pointed out that even though the correlation between stop-watch timing and mechanical timing is very high, yet there is a small difference which is significant enough to warrant an effort to reduce it still further by improving the stop-watch timing technique.

Summary and Conclusion

Stop-watch and mechanical times were compared on 320 races involving two dash and three hurdle events. The results showed that there were high correlations (.9815 to .9948) between the two times. The stop-watch times were consistently shorter than the mechanical times, by an average amount of .092 second. In four out of five of the events studied, the chances were more than 90 in 100 that the time difference between the means was greater than zero. The consistency of the differences found between the times recorded by the two methods accounts for the high correlations.

Changes in the 1936 Football Rules

(Continued from page 14)

will always take the distance penalty for a personal foul rather than the penalty for interference which merely gives them the ball at the spot of the foul.

23. PAGE 59, R13, S2—As the teams no longer are to be notified three minutes before the beginning of the second half, the S. N. calling for the Referee to cause this to be done has been deleted.

24. PAGE 72—Officials should note that three new signals have been added and one omitted. The "folded arms" signal no longer designates a flying block or tackle but now indicates "delay of game or extra time-outs." The other new signals cover "clipping" and "running into or roughing the kicker."

This list of changes and reasons for the changes is not official and must not be taken as in any way supplementing the rules. It has been prepared by the Eastern Intercollegiate Association merely as an aid to its officials. If it is of help to others we will, of course, be pleased.

Interschool Sports in the Educational Program

(Continued from page 11)

really useful man there must be implanted in him high desires. His head, heart and hand need direction. There must be some standard which will determine the use to which they are put. Every man needs what might be called volition or action qualities that will translate into activity the products of the different parts of his nature.

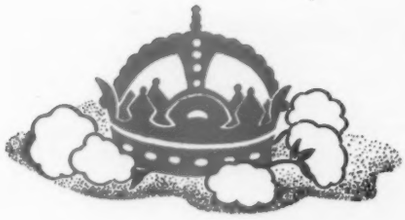
Now this problem of making the boy into a man—developing his all-around man-power—rests principally with three agencies; the home, the church and the school. However much may be done by other agencies, the problem continues as the basic function of the school. It is the part interschool sports should have in this many sided problem of education in the schools that I wish to discuss briefly.

The question is often asked as to just what there is of educational value that our interschool competitive sports program has to teach. I recognize, of course, the need for improving physique and of stimulating normal bodily development in the growing boy. I recognize also, the value in affording an outlet for the natural human desire for play and the worthy use of leisure time from the viewpoint of both player and spectator. I recognize, also, that there are worthy objectives in this athletic program in the integrating of community interest in such a way that general educational and recreational facilities may be furthered; and that such a program may be an aid in general school administration by building a morale in the student body that will reflect itself in a more desirable school spirit of loyalty and interest, in the success of all school activities. My faith in interschool athletics as a part of our educational program is not based entirely upon any one or all of the above objectives.

The Athletic Field As Laboratory

I am firmly convinced that our interschool competitive sports program, properly administered, developed and supervised, affords a laboratory training for the development of character not found elsewhere in the life of the growing boy.

Merely to state that football and other athletic games develop character in those participating would be unscientific. Character has been defined by some educators as a system of action traits. If we were to accept this definition, there would be a great range in the desirability of these ways of acting or responding. We speak of a bad character or a fine character, judging the total ways of any individual's acting according to the standard set up by society as the type most desirable. In order to determine the character ed-



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ucational value of any activity, an analysis must be made of that activity: first, as to what instinct or tendencies are exercised by participating in that activity and how great is the opportunity for the expression of these tendencies, and, second, as to the number of conduct situations which may arise in the social relationship.

The most valuable character training would arise through those activities which offer the greatest opportunity for the exercise of the individual's tendencies, and which by the very nature of the activity offer the greatest number of conduct situations. Football, basketball and all our other competitive sports offer a greater opportunity for these situations than any other activities in the school program. It is not the game of football or basketball itself which makes for character, but the experiences in the playing of the game which fit into the individual's life. The related situations found in these games and those off the field are the factors which make the games of value to player and spectator. The fundamental problems in these athletic games, as in life, spring out of the intimate relation between boys and have to do with moods, attitudes, dispositions, jealousies, misunderstandings, willingness to learn and to work. The boy may develop his mind and discipline it in his academic work. The athletic program furnishes the big laboratory of experimentation where the boy learns to discipline himself and experiment with himself against other boys, mentally, physically and emotionally.

Sports and athletic contests of this nature are the complement to our book education. Our books tell us to live in the interests of all, but only the lessons we practice are really learned. Sports and athletic contests are the laboratory of the school as a whole. It is on the athletic field and in the gymnasium that our student learns by participation and by observation the real value of teamwork, the value of practicing what has been suggested to him in the classrooms; to forget himself in the interests of all concerned, to live with and not just amidst his fellow men.

Athletic Field and Classroom

The character of an individual engaged in athletic participation is being developed by a struggle against himself—a struggle against his own inability to achieve or to excel in his chosen sport. His character is made strong not only by competition against himself, but by competition against others. It is in this field that our modern system of interschool sports fulfills an important function and deserves a most prominent place in the curriculum of any school graduating men. There is nothing more important than that a boy should learn during the formative years of his life to control his emotions and command his own powers, to focus his powers upon a single worthy objective, to mobilize his powers quickly and completely, to learn to think fast and realistically and to make decisions, to subordinate his interests to the interests of the group he represents, to co-ordinate his activity with the activity of others engaged in the same task, to call up and expend freely in an emergency his last reserves of strength and courage, to pour out all of his energy in a furious effort and at the same time have a chivalrous regard for the rights of others and the rules of the game, and to keep within limits dictated by decency, sportsmanship and gentlemanly conduct. This is the kind of training that appears to me to lie at the heart of development of the individual toward good and useful citizenship, and is basic to any educational program.

Now, it is possible in the classrooms to preach all these precepts to a boy, to theorize on the need and importance of them, but it is imperative that the boy have the laboratory training in carrying out the precepts we give him. Our interschool sports program on the athletic field and in the gymnasiums provides such a laboratory and gives the boy an opportunity to practice these teachings. This type of educational program not only teaches the boy the way to win and the will to win; competitive sports give him something else. They teach him how to meet defeat. A boy cannot win all the time in his games or in the daily contests of the great game of living. When he is defeated, what is his attitude? Does he curl up and quit? Does he whine? Does he attack the sportsmanship and ability of his opponent, or does he blame the officials of the contest, or attempt to find numerous other alibis for his defeat? In contrast to this picture, does the boy, in defeat, keep his chest out and his chin up, with clear eyes and self-respect? In defeat, is he able to stand by the side of the road and cheer as the victor goes by, but beneath this outward expression does he have an unbeatable spirit?

If our interschool sports program teaches that spirit to our boys, they have learned something that life cannot take from them.

A properly organized and administered program of interschool sports attempts to develop these habits and make them a part of the ideal of each student. A program of this kind in its proper place, and kept in proper educational perspective, becomes an outstanding and most valuable program of education in our schools today. The lessons our interschool sports program teaches to both player and onlooker are far-reaching and invaluable. The sports are rough, rugged, virile games, and herein lies one of the greatest of their values. They are the best antitoxin we have with which to cope with the insidious miasma of softness and ease which threaten the virility of the present generation.

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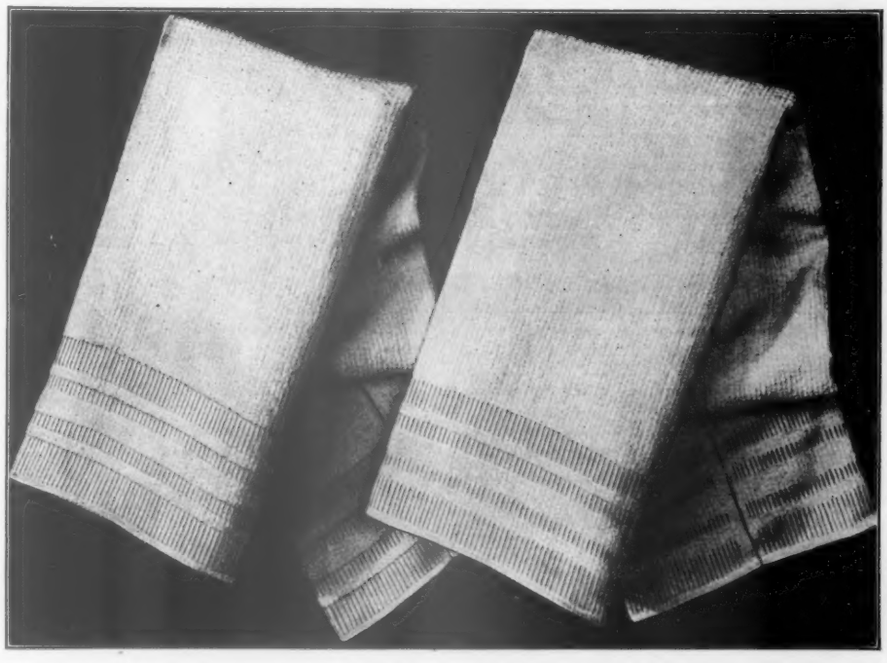

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